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THOMAS SYDENHAM



CLINICAL · MEDICINE AND · SURGERY

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SYDENHAM (The Founder of Modern Clinical Medicine)

THE HISTORY of our own country is not without examples of soldiers (chiefly medical officers) who have made large contributions to medical science—Beaumont, Sternberg, Gorgas and Walter Reed, for instance—and even of medical men who have become famous soldiers, like Leonard Wood; but we can scarcely show a cavalry officer who has changed the whole course of medical thought.

For hundreds of years, up to the middle or latter part of the seventeenth century, Medicine was a field for dialectics and an arena for jousting over pet theories while, in many instances, the sick man was neglected or forgotten. Hippocrates was in the discard and the Galenists and other propounders of hypotheses were in the saddle.

In 1624, at Wynford Eagle, Dorset, England, Thomas Sydenham was born into a well-to-do family of staunch Puritans. He was educated at Oxford and, when the Great Rebellion broke loose, became a captain of cavalry in the Parliamentary army, where he served for four years.

When he was thirty-two years old, Sydenham decided to practice the profes-

sion he had studied, so he married and went to London where, after doing some "postgraduate" work at Montpellier, he was licensed by the Royal College of Physicians, in 1663.

His first book, a small volume entitled, "*Methodus Curandi Febres*," was published when he was forty-two years old and began with a restatement of the old Hippocratic *vis medicatrix naturae*, in this wise: "A disease, in my opinion, how prejudicial so ever its causes may be to the body, is no more than a vigorous effort of Nature to throw off the morbid matter and thus recover the patient." This was his creed.

We, of today, have just been going through a period of the apotheosis of the laboratory and all its works. Harvey, Vesalius and their like have been our gods, and anatomy, physiology and pathology have received far more attention in our schools than that devoted to the care of sick people. Now the pendulum is swinging and we are beginning to overtake Hippocrates and Sydenham again.

A typical Saxon, with a large fund of "common sense" and a keen interest in and sympathy for suffering human beings, Sydenham cut loose from all the theories

of the academic researchers, sat down by the bedsides of his patients and studied *them* and their diseases, classifying them as a botanist or zoologist would work out genera and species, until he figured out what line of treatment was indicated in *that particular case*. He was the typical clinician, and his *methods*, if not his basic ideas, have a distinctly modern flavor.

Studies in the influence of climate, geography and other factors upon the spread of diseases (his treatise on scarlatina, giving the malady its name, is a classic) brought him, posthumously, the designation of "Father of Epidemiology"; his work on gout (from which he, himself, suffered) is esteemed his masterpiece; he wrote, soundly, upon pneumonia, dysentery, chorea, hysteria and various other subjects, popularized the use of Peruvian bark, employed chiefly vegetable drugs, and was the instigator of the modern, humane method of treating fevers, using fresh air, baths and cooling drinks, which was the height of heterodoxy in those days.

Sydenham was so thoroughly out of sympathy with the Medicine of his time that he was far from popular with his confreres, which, while it grieved him, was the very secret of his success as an internist. He held himself "answerable to God" for the welfare of his patients and possessed a power of imaginative sympathy rare, indeed, in men of his type.

It is difficult, today, to estimate the true stature of Sydenham, whose place in history must be adjudged on the background of his time and country and the immense changes which his teachings and example made in medical practice. He seems to have well deserved the designation of "The English Hippocrates."

THE CENTENARY OF CHLOROFORM

THE present generation of physicians is so accustomed to the use of anesthetics of one sort or another in all surgical operations—even the minor ones—that it is

difficult for most of us to imagine what surgery must have been like in the days of Ambroise Paré, John Hunter and Ephraim McDowell, or to picture to ourselves the tremendous impetus which was given to that branch of the healing art by the discovery of substances which would render the surgical patient mercifully unconscious during the manipulations necessary for his recovery.

Among the younger surgeons of today, who work in well-equipped hospitals, where the anesthetic gases and persons skilled in their employment are readily available and where experts in the application of local, regional and spinal anesthesia are at hand, even ether is looked upon as being rather out of date, and chloroform, as an anesthetic, is regarded as a relic of the dark ages.

But such ideal conditions do not obtain universally, even in this land of medical progress and opportunity. In small towns and in the remote homes of farmers, herders and miners, where those ornaments of our profession, the country doctors, must often fight their battles with pain and death single-handed, chloroform is still a boon beyond price, under circumstances where the more favored modern anesthetics are out of the question.

This year marks the hundredth anniversary of the discovery of chloroform, simultaneously, by Dr. Samuel Guthrie, in Sackett's Harbor, N. Y.; Justus von Liebig, in Germany; and Soubeiran, in France, in 1831. Dr. Guthrie hit upon the modern method of making this drug (known to chemists as trichlormethane) by distilling alcohol with chlorinated lime, and called his product "spirituous solution of chloric ether." The name, chloroform, was given to the substance by Dumas, who first isolated it in a pure state, in 1834.

For several years, chloroform was a chemical and pharmacologic curiosity, for it was not until, in 1847, Sir James Young Simpson, the great obstetrician of Edinburgh, saw its possibilities and used its

fumes to relieve the pangs of childbirth, that the medical profession awoke to the immense clinical possibilities hidden in this product of laboratory research. Its discoverer, Dr. Guthrie, never knew, in this life, how he had blessed mankind, for he died in 1848, before Simpson's pronouncements had been generally accepted and the use of the drug made respectable by applying it in the accouchement of Queen Victoria.

The discovery of ether and its uses, coming along at about that time (Dr. Crawford W. Long first used it in 1842, and Dr. Horace Wells in 1846), did not seriously interfere with the popularity of chloroform as a general anesthetic until about the beginning of the twentieth century, for ether was far less pleasant and had other serious drawbacks, which were overruled only when it was clearly demonstrated that, in inexperienced hands, the latter drug was decidedly the safer, so far as the patient's life was concerned.

In connection with the dangers of chloroform, a fierce controversy long raged as to whether death, when it occurred, was due to cardiac or to respiratory paralysis, and two research commissions, one of them headed by Sir Lauder Brunton, were financed by an East Indian potentate, the Nizam of Hyderabad, to decide the matter. Their conclusions, that the lethal effect was respiratory paralysis, were bitterly combated by several American scientists.

It now seems reasonably clear that both were wrong and that the cause of death in chloroform poisoning is *vasomotor depression*, "whereby the arterioles allow the blood to pass too freely into the great blood vessel areas which exist in the capillaries and veins, and as a result the man is suddenly bled into his own vessels, as effectually as if into a bowl."* It is true, however, that the *respirations*, rather than the pulse, of a patient under chloroform anesthesia must be watched carefully for signs of

dangerous overdosage, because, among other reasons, the fall in blood pressure which always occurs makes the pulse difficult to feel and to judge.

The *advantages* of chloroform are: its rapidity of action; its more agreeable odor; its non-explosive character; its relatively small bulk; and the fact that it causes little irritation of the air-passages and is less apt than ether to produce nausea and vomiting. Its great *disadvantage* is the possibility that it may kill the patient.

In most cases, chloroform is a reasonably safe anesthetic *in the hands of one skilled in its use*; but never in those of a tyro. Most of the deaths occur during the first few minutes of its administration, due to too-great concentration of the drug, which results from the deep or very rapid respirations which are common in the early stages.

In the absence of the anesthetic gases and of an anesthetist skilled in the use of the cocaine analogs and derivatives, chloroform is preferable to ether in hot climates or in operations where cauteries or electric instruments are to be used (because of its non-explosibility); wherever large numbers of people must be anesthetized rapidly, as on the battlefield or in great earthquakes, fires or other calamities; in cases of Bright's disease requiring surgery (because the smaller quantities required are less irritating to the kidneys than the larger quantities of ether which must be used); in cases of aneurism or atheroma (because the patient struggles less with chloroform than when ether is given); and in patients who already have bronchitis or are known to possess an idiosyncrasy against ether. Parturient women seem able to take chloroform with more safety than other women.

It is *contraindicated* in cases of shock (because it lowers the blood pressure); in obese persons with flabby belly walls (because diaphragmatic action is impaired); in partial starvation, eclampsia and diabetes mellitus, which tend to cause acidosis (as does also chloroform); in lymphatism and

*H. A. Hare, M.D., in "Practical Therapeutics."

persistent thymus; and in cases of myocardial degeneration, severe fatigue or advanced cardiovascular-renal disease. A well-compensated valvular lesion is not a contraindication. Alarming effects from the use of this drug are six times as common in men as they are in women.

A brief anesthesia, for dressing painful wounds, may, in the absence of the minor local anesthetics such as Butesin or Anesthesin, be produced by saturating a pad of flannel with 5 cc. of ethyl chloride; 1 cc. of chloroform; and 24 cc. of ether and placing it over the patient's mouth and nose, covered with a piece of dry flannel and that, again, with oiled silk, having a hole cut in it for the patient's nose. Anesthesia begins with the second breath and lasts for ten minutes.*

In view of the vast saving of life and amelioration of pain which have resulted from the use of chloroform in medical practice, we should stop now and then, particularly during this centennial year, to pay tribute and offer thanks to the earnest men of the laboratories, who gave us this drug, and to the bold pioneers who had the vision and the courage to defy the authorities of their day by applying it to the service of mankind.

Anesthesia always means an approach to death, even in the healthiest of men.—Dr. Hobart Amory Hare.

THIS DAY

SOON after the first lightening of the eastern horizon the birds began to sing gloriously, and presently the early morning breeze was whispering among the mature leaves of midsummer. A soft flush spread and the first level beams of the rising sun made jewels of the drops of dew on the tips of the grass blades.

Slowly the stirrings of the air faded away, like a sigh that is spent, and strong heat enveloped the world. The dew drops returned whence they came. The strings and wood-winds of the bird chorus were

hushed, except for occasional notes from some of the sturdiest songsters, and the cicadas took up the theme with their brass. At last, even these were silent.

To the north and west, great, greasy thunder-heads began to lift above the tree-tops, and the sun turned their summits to silver. The world was awaiting for that which impended, while blue-white ropes of lightning worked at pulling the heavy draperies of the storm toward the zenith and the distant rumble of heaven's pulleys became perceptible.

All at once the leaves in the highest tree tops began to murmur once more, not with the friendly sibilance they used at dawn, but rather with a frightened prescience of danger approaching.

A shattering explosion of fire and sound burst the floor of the empyrean and a wall of gray whiplashes was let down and came rushing toward us, while the trees, now thoroughly panic-stricken, twisted, now this way and now that, in their efforts to escape. In vain! The torrent was upon them!

For a half-hour, pandemonium, darkness and the roadsides roaring with water like a millrace, while the barrage of the skies made the windows rattle and the glasses on the pantry shelf clink.

And then the somber and leaden hue of the pall lightened to gray; then to pearl; and the erst solid fabric began to fray at the edges, curl up and show moth-eaten holes, where the blue presently showed through in patches large enough to make a pair of breeches. Then the sun again and the birds, emerging from under the eaves and from other dugouts to which they had retired while the battle raged, to preen themselves in the scarlet and purple of the tempestuous sunset and sing themselves to sleep as they sung us awake.

The peaceful-seeming stars, so far away that their volcanic outbursts seem but the winking of friendly eyes, took up their age-long vigil again and it was night,

*Hare, "Practical Therapeutics."

closing the cycle of one summer day—*our* day, if we had the wit to claim it and use it and rejoice in it, watching its changing moods, harkening to its manifold voices and breathing its fascinating scents, instead of fixing our thoughts so firmly upon our little, personal plans that we had no time for leaf-shadows and bird-harmonies and, perhaps, only scowls and profanity for the magnificent pageant of the storm.

This day and this only was ours. Yesterday, whether we *lived* in it or not, has escaped; tomorrow will again offer us the tapestry of *this* day, to cover us with a mantle of glory or be thrust away in the cobwebbed attic of inattention and forgetfulness, while we pick over the musty rags of worry and preoccupation or try to fashion us a robe from the tarnished tinsel of pride and selfish ambition.

Why not live the days as they come to us, joyously rifling each of its precious freight of experience and beauty to build us a house wherein our souls may dwell, amid high romance, until we pass on to other scenes of endeavor, taking with us naught but the powers and faculties we have acquired by acting upon our environment constructively and the expansion of consciousness which comes from looking upon and loving each separate *this* day?

Let us worship the simple richness of a single day.—J. Krishnamurti.

SUBSIDIZED PRACTITIONERS

THERE is a fairly general agreement, among those who are considering the question seriously, that a remedy for many of the ills that are now affecting medical practice would be found if a higher percentage of the younger physicians could be persuaded to undertake general practice in rural communities, at least for a sufficient period of time to make the discovery firsthand, that human beings are complex physical organisms, consisting of something more than noses or teeth or tonsils or uteri or

appendixes or whatever it is in which the young man, who has never yet really seen a man or woman *whole*—body, emotions, mind and soul—elects to specialize.

The young fellows won't go to the country because they are afraid to get away from the hospitals and laboratories, to a place where they would have to stand alone; because living conditions are less easy and attractive in the smaller towns; and, among a number of other things, because they fear that their incomes will be pitifully meager and that they will have to "earn them twice" by struggling to collect bills from reluctant debtors. If the financial risks could be removed from country practice, more of the young fellows would take to it, because the fiduciary hazards of a beginning city practice are enormous.

The medical situation in Canada is not materially different from that in the United States. When an old doctor, in a small town or rural neighborhood, dies, the people are often left with no, or very sketchy, medical care available, as it is difficult to keep a young man out on the edge of things, unless there is a special inducement for him to stay there.

Ten years ago, a young physician in Sarnia, Saskatchewan, decided that his income from private practice was insufficient for his needs and that he would go elsewhere. But, before doing so, he went to the authorities of the "rural municipality" (which corresponds to our county) and suggested that, if they wanted to keep a doctor in their midst, they would have to pay or guarantee him a reasonable income. This idea sounded so good to the authorities that they acted upon it; and now twenty "rural municipalities" in Saskatchewan and three in Manitoba are employing full-time municipal physicians, and twelve others are making grants, up to \$1,500 a year, as an inducement to physicians to practice in the communities and as remuneration for services as public health officers and for the care of indigent persons.

The average population of these municipalities is about 1,800 and the average salary paid the physician is about \$4,000, for which he acts as health officer, cares for the paupers and renders free service to all taxpayers, except that, in some places, he is permitted to make nominal charges for first calls at a home, for reducing fractures, attending obstetric cases and a few such things, which extra fees will run from \$1,000 to \$1,500 a year more. Where there is a town in the district, the municipal physician, if he has time to spare, is permitted to do a private practice among non-taxpayers and transient residents. The funds for this purpose are raised by a tax on land values, which averages from \$10 to \$15 a year for each family served.

The doctors find that this plan gives them a satisfactory guaranteed income, without the necessity for bill collecting, and keeps them comfortably busy, without pushing them to the point where good work becomes impossible. Most of them devote a good

deal of attention to preventive medicine and prophylaxis, which, in the end, makes their work lighter.*

It is a fact worthy of note that no full-time, nonmedical healers (osteopaths, chiropractors or Christian Scientists) live in communities served by municipal physicians, and that the patent medicine peddlers report a marked reduction of their business in these localities.

This scheme may appear to some to have earmarks of State Medicine, which most of us fear and dread. Perhaps it has; but, if so, all or most of the especially undesirable features of such a plan seem to have been eliminated and the method appears to be functioning to the satisfaction of all concerned. On that basis, it is recommended to the consideration of rural physicians in the United States and to that of the communities which they serve.

*Full details of the "Saskatchewan Plan" are contained in Publication No. 11, of the Committee on the Costs of Medical Care, 910 Seventeenth St., N.W., Washington, D. C.

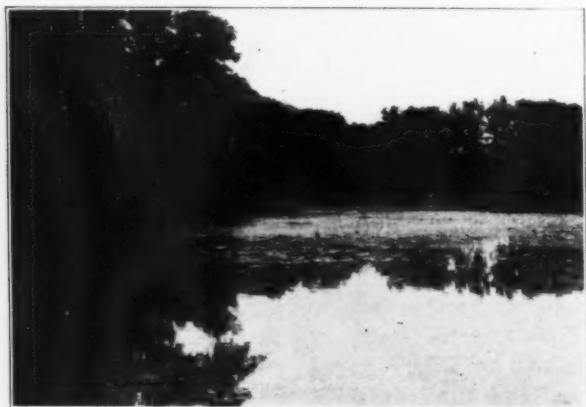


Photo by G. B. L.

MIDSUMMER

LEADING · ARTICLES

The Complete Physical Examination* (How the Hospital can be Utilized to Provide the Public the Best of Medical Service at a Moderate Cost)

By Emmet Keating, M.D., Chicago

THE medical profession is still thinking in terms of acute diseases. Typhoid fever of forty years ago has been replaced by appendicitis and cholecystitis; malaria by toxic goiter and pelvic disturbances.

The medical profession refuses to think in terms of health. It has no qualms about charging \$200.00 for an appendicitis operation, but stands aghast at expecting a patient to pay \$50.00 for a complete physical examination that makes possible a long life, freed from many disabilities and discomforts and, at the end, an approach to a physiologic death.

Our medical schools have made wonderful advancement in the preparation of students for their life work, but in teaching the application of the knowledge acquired by the students, they are still using as clinical paradigms, physical wrecks, who are of interest only as examples of the result of ignorance and neglect of early symptoms and physical findings.

They continue to give very meager instruction in the study of the normal, utilize spectacular and terminal stages for their clinical teaching, and then expect to graduate men who will be able to recognize beginning symptoms and physical signs of disease.

The taking of a medical history, the making of an intelligent physical examination, the ability to correlate and correctly appraise the statements contained in the history, the facts obtained from the physical examination, the laboratory data, and the findings recorded by instruments of preci-

sion — thermometer, sphygmomanometer, pelvimeter, metabor, ophthalmoscope, electrocardiograph, scale and x-rays — is the most difficult task that confronts the physician.

The patient who is acutely ill from one of the self-limited diseases, should not be given a complete physical examination. The doctor's first duty to the acutely ill is to conduct his patient through the illness with a minimum amount of discomfort, loss of time and permanent injury. The acutely inflamed appendix, the ruptured gastric or duodenal ulcer, the ruptured ectopic pregnancy, the strangulated hernia, are comparatively easily diagnosed and should be subjected to prompt operative therapy. Aside from these or similar conditions, no patient should be admitted to the operating room until a complete and competently-made physical examination has confirmed the diagnosis made as a result of partial and superficial observations. Although infected tonsils and teeth are readily and easily diagnosed, and their removal is many times the only thing necessary to restore the patient's health, these measures are only a small part of the program requisite to insure a return to the normal.

Disappointed patients tell a very common story of their having been told that the removal of their tonsils and teeth would cure their ills. Careful questioning will lead them to admit that removal of the tonsils and teeth caused the disappearance of one or more symptoms, but the patients are dissatisfied and unhappy, because removal of these organs has not brought about the realization of the doctor's promises.

*From the Department of Medicine, Belmont Hospital. Read before the Fort Wayne, Indiana, Medical Society, April 21, 1931.

A very bad practice, that is growing in extent, is the sending of patients either to the hospital or commercial laboratory for a Wassermann test, a basal metabolism determination, a blood-sugar estimation, an electrocardiogram, or some one or two things that the physician hopes will establish a diagnosis. A common error is referring a patient for an x-ray study of the gastrointestinal tract, when a careful history and physical examination would have revealed a cardiac or other disturbance. This piecemeal way of trying to make a diagnosis discredits the physician and is both expensive and unfair to the patient, because he has spent his money, and his trouble or troubles have not been discovered. When the record of the complete physical examination is on file in the physician's office, the sending of the patient, once or twice a year, for any one or more of these laboratory studies is both proper and necessary.

There is only one right way to begin the treatment of the ambulant patient, or the patient who has lost ground to the extent that necessitates his going to bed—give him the benefit of a complete physical examination. *Short cuts are proper for the acutely ill, but never for others.*

It will be a long time before the supposedly-healthy public seeks the benefits of a complete physical examination. For the present, we must be satisfied with giving these benefits to those who find themselves handicapped by physical conditions impairing their earning ability and causing them more or less discomfort. At some of the highly organized clinics, patients have the benefit of this service, but the detailed histories and laboratory reports are retained by the clinics. This practice falls short of the ideal, because the records made at the clinics are not forwarded to the family doctors, who are the rightful custodians of the health of the people of their community. Unless the family doctors have in their files properly-made records of their patients' life histories, the patients cannot be given proper service.

Every family doctor can be furnished with these histories when all hospitals, large and small, make such a procedure a part of their program for safeguarding the interest of the family doctors and their patients. This will not work a hardship for the smaller hospitals, because the number of well-trained physicians has increased to an extent that is beyond the staff limitations

of the large hospitals. The modern trend in large cities is the building of a number of hospitals of 100-bed capacity, wherever the population of large apartment buildings warrants their support.

The already established medical department in each hospital should have a department composed of men well trained and mentally fitted to do nothing but make careful and complete physical examinations, ably supported by the x-ray and clinical laboratory. A team of this kind can render the service at a lower cost than can the most competent individual physician. This department of the hospital will in no way interfere with the routine and regular functions the hospital performs.

In each hospital the number of physicians making complete physical examinations will be in proportion to the number of patients referred by the doctors who patronize the hospital. These examinations cannot be done on the basis of mass production. Increase in the number of patients will require increase in the number of examiners. In the large hospitals where charity and pay patients are received, the number of examiners will be fairly constant, because when pay patients are scarce, the charity patients will suffice to keep the examiners busy. With the correlation of a large number of small hospitals, a shortage of examiners in some of the hospitals can be supplied by calling examiners from the hospitals where there is a shortage of patients. A large number of patients will be ambulant and will save the hospitals the loss incurred for bed, board and nursing service.

The work of the examining staff at each hospital, when occasion demands, should be supplemented by the advice of the oculist, otolaryngologist, urologist, psychiatrist, dermatologist and pediatrician. I have purposely omitted the general surgeon, because the family physician should have the privilege of selecting his own surgeon. When the examination is completed, the carefully typewritten record, with laboratory reports attached, is reviewed in the presence of the patient. The patient and his family are then informed that this detailed record will be placed in the hands of his family physician, who, because of its possession, is and will continue to be in a position to give the patient the best treatment to regain and preserve his health.

DISPOSAL OF RECORDS

A carbon copy of this record should be

kept on file in the hospital, because loss of so valuable a document by fire or other accident in the office of the family physician would mean a financial hardship and loss of time to the patient for a re-examination, and would deprive the family physician of his best asset. Should the patient move or decide to change family doctors, the hospital should not give a copy of the history to the newly chosen physician, except on a written order from the discharged physician. It should be made clear to the dissatisfied patient that the place to receive a copy of his examination is from his family doctor, by paying a reasonable fee, such as is charged by the legal profession for making transcripts.

The copy furnished by the discharged physician or, on his order, by the hospital, should not be given to the patient, but should be sent to the newly chosen family doctor. This rule will benefit the patient, in that it will prevent his changing physicians for trivial reasons. If the family physician refuses to give a copy of the history to the physician whose services the disgruntled patient has sought, the hospital must uphold him in the position he has taken. Refusals will be rare. The wise doctor does not try to hold dissatisfied patients.

The making of complete physical examinations requires a highly specialized group of workers, equipped with instruments of precision, and the service of laboratories equipped to do many things not required for the ordinary hospital patient. The laboratories will be presided over by physicians interested in and capable of doing research work. Hospitals working independently cannot afford to pay men of this type. The chain idea will solve the problem. At present, when other than routine work is required, either the university or commercial laboratory must be employed. The hospital, rather than the physician's office, is the logical place to conduct the scientific investigations necessary to the making of a correct diagnosis.

FINANCIAL ARRANGEMENTS

To avoid confusion, the difference between routine and special hospital service must be clearly understood by the hospital superintendent before a service of this kind can be integrated with the general scheme of conducting the hospital. This service will draw on the routine and special activities of the nurses and personnel. Special forms

will be required for the bookkeeping department and special examinations from the laboratory.

Probably the most perplexing problem in the administration of this service is the fixing, collecting and distribution of the fees. To satisfy the patient, the doctor referring the patient, the hospital, and those who conduct the examinations, flat rates must be established that will conform to the patient's income. It can be readily understood that there will be a great diversity in the time spent and the amount of x-ray and laboratory work necessary to be done and oftentimes repeated, for different patients. This means that the minimum flat rate will not, in all cases, cover the cost of the service rendered to the group of patients in the low-income class. This will not mean a financial loss, either to the hospital or to the physicians making the examinations, because the larger fees of the higher-income classes will abundantly care for this certain loss. To tell a patient what the examination will cost before it is made, is not easy. Some of the patients, in each of the income classes, will be able to pay higher fees than others. The single man with no financial responsibilities and the married man with children who are contributing to the general support of the family, should be charged more than the married man with dependent children.

One of the prime objects sought is to give all patrons the benefit of the hospital's ability to render a service that will stand the test of the most competent critics. This service is only to be given to those who are able to pay. Charity patients will not be received. The place for them is the endowed or municipal hospitals.

Collections must be made by a clerical force. People resent paying the doctor because, in their subconscious minds, they think the practice of medicine is entirely a labor of love and charity. A financial department is more conversant with business than is the professional group. It can get better results by accepting the responsibility of collecting the total fee, after the charges from the various departments have been received at its office, in keeping with the income of the patient and his ability to pay.

This method of a centralized collecting service has many advantages for the patient, the hospital and the examiners. The financial department is the business executive who stands between the patient who receives the examination and the specialists

who do the work. It will collect a single fee for the entire service rendered and will distribute the fee among specialists and the departments of the hospital that have participated in the examination. Big business does not collect its bills through its shop or sales departments. Medicine is one of the most important "big businesses." The examiners, except new recruits, will not work on a fixed salary, but will receive a percentage of the income received from the patients. This system of financial reward will bring to the task men well equipped intellectually, deeply interested and not afraid to work.

THE MEDICAL HISTORY

The medical history has three objectives: (1) Ascertaining the cause of the illness from which the patient suffers; (2) a permanent record for future reference; (3) a living textbook of medicine, flexible and responsive to modification of conclusions, to the observations of changes caused by time, accidents or infections, and the application of new and proved concepts to both diagnostic conclusions and methods of treatment.

Originally, just as is now done in the case of acute diseases, the primary reason for obtaining a history and making a superficial examination was to determine the major cause of the patient's illness and to attach the proper label. The history was confined to the story of the present complaint and the incidents immediately preceding the physician's visit. The patient's narrative was seldom put in writing by the physician. The physical examination was usually confined to that portion of the patient's anatomy that was the seat of the greatest discomfort. No permanent record or attempt to describe the findings in writing was made. Early textbooks in medicine were written after years of clinical experience had served to fix in the minds of the authors the pictures of the onset and course of various diseases.

With the advent of the hospital, the keeping of records began. In addition to notations of duties performed by the nurse, these records showed the pulse, respiration and, after the invention of the clinical thermometer, the temperature.

Teachers of medicine, realizing the value of these permanent records, in the preparation of papers and the writing of textbooks, and their necessity for the compiling of vital statistics, sensed the added value of

recording the history and physical findings.

The first two objectives have been attained and need no further discussion. The third—the recording of the complete physical examination—awaits acceptance by the medical profession. A few men, especially those connected with medical centers that invite patients from far and near, understand the value of the third objective in correcting accepted views and the great impetus such histories will give to a better understanding of the early manifestations of disease processes and the detection of them before the patients reach the incurable stage.

The efforts of organized medicine to educate the public to recognize the value of periodic health examinations have met with small success, because the majority of the medical profession, both family doctors and specialists, do not believe in periodic health examinations. Nothing new in medicine has been adopted by the public that has not received the endorsement of the general medical profession. The public will drink patent medicines, in spite of the advice of physicians, but will not accept new ideas about the practice of medicine unless those ideas have the approval of family physicians and specialists.

The twice-a-year health interview with patients will be of very little value unless based upon a previously-made, careful, detailed history, physical examination and appended laboratory reports. A minimum of laboratory work for the original examination should include; chemical and microscopic examination of the urine; red, white and differential blood cell counts; blood Wassermann test; electrocardiogram; x-ray study of the chest; and a basal metabolism determination.

The history for a permanent record, to be placed on file in the office of every family doctor and specialist, is as different from the hastily-written history of the hospital interne as the beautiful cabinet, made by the cabinetmaker, is different from the clumsy box made by the carpenter.

With a history of this kind on file in the office of the general practitioner or specialist, he is in a position to make an intelligent decision as to what is necessary at subsequent visits. It may be a urine examination only. It may be a blood cell count, including a differential; an x-ray picture; electrocardiogram; intestinal study; a kidney function test; a basal metabolism test;

or any one or more of the laboratory studies needed to make it possible to compare the patient's present condition with the symptoms and findings of the previously-made complete physical examination.

HOW A HISTORY SHOULD BE WRITTEN

Physicians who expect to do this work must possess the qualities of broad culture, patience, the advantage of at least five years' experience in general practice, and a well-grounded knowledge of pathology and bacteriology.

The history is begun by entering the surname of the patient, followed by the Christian name, the address and the telephone number. If the patient has no telephone number, it is well to note the phone number where he or she may be reached.

The next point to note is the nationality and place of birth. Having a record of the place of birth may be useful, because of the diseases indigenous to different latitudes as well as longitudes. Then follows the age, marital state and occupation.

Histories written for physicians in charge of medical service at industrial plants should contain information relative to the patient's fitness for various types of work.

When both the medical profession and the public are sold on periodic health examinations for everybody, a number of histories will be made of people who consider themselves in perfect health, but until that time arrives we will have to content ourselves with making histories of those who present themselves because of discomfort, pain or distress. For this class, the first thing to be noted is their present complaint. Under this heading, note their major complaints and avoid going into too much detail as to manifestations of trouble in various organs.

Then proceed to inquire into the onset and course. This will require careful and repeated questioning, because the beginning of their present trouble may be months and years prior to the patient's visit. There will be found a few cases in which the present complaint and the onset and course are so nearly parallel that both will be considered under the combined heading of *Present Complaint and Onset and Course*.

Childhood Diseases: The patient's memory of childhood diseases is often confused; if the patient is uncertain, the uncertainty should be recorded. In addition to the common diseases, a good deal of attention should be given to finding out whether or

not the patient suffered from attacks of sore throat and "growing pains."

Subsequent Illnesses: The forgetfulness of patients about subsequent illness is surprising. Not only do they forget conditions like bronchitis and influenza, but they seldom think of appendicitis or hernias as other than surgical procedures. In noting the occurrence of subsequent illnesses, as in noting the occurrence of childhood diseases, the age of the patient when the attacks occurred should, if possible, be obtained.

Accidents and Injuries: Even minor injuries should be recorded, because they may have a bearing upon the patient's mental attitude or physical condition.

Previous Surgery: Operations should be set down in the order they were performed, with dates, and, if possible, definite information from hospital records.

Family History: This should include the health of the parents, if alive, and their age; if dead, the cause of death and their age at time of death. If possible, knowledge of abortions or still-births of the mother should be noted. In obtaining the history of brothers and sisters, the same procedure should be followed. The incidence of carcinoma, tuberculosis, asthma, epilepsy, insanity or pronounced eccentricities of members of the family should be recorded. Collateral family history is sometimes enlightening in the making of a diagnosis.

Menstrual History: The patient's age at the appearance of the menses, and departures from the normal, from the beginning of menstruation to the time the history is taken, should receive careful consideration. The time of the last menstruation should always be noted.

Marital History: The age of the patient and of the marital partner, at time of marriage, as well as their condition of health, should be noted. The taking of the marital history closely parallels the taking of the family history, as regards health or death of children and occurrence of abortions or still-births.

Respiratory System: This study should begin with inquiry about the nose and nasopharynx, and proceed to further questioning regarding the throat, the larynx and the lungs. Note the presence or absence of cough; amount and character of expectoration; large or small hemorrhages.

Cardiovascular System: Ability to withstand sustained exertion without breathlessness and the type of exertion that will

cause distress in breathing, when an equal amount of work of other character does not affect the patient, should be noted; also the presence of pain in the sternal region and left side of the chest, and radiation, if not static; swelling of the face, hands and feet, with time of its remission, or constancy; dizziness, fainting or anorexia.

Gastrointestinal System: Find out about the appetite, type of food eaten and frequency of bowel movements. To ask a patient if he or she is constipated, will very often result in unsatisfactory and unreliable information. The presence of nausea, vomiting (character) and dizziness or fainting should receive careful attention; also the presence of hemorrhoids, ulcers, abscesses, itching and pain or bleeding from the rectum. The location of pain should receive careful inquiry. It sometimes requires close questioning to obtain the exact location of abdominal pain.

Genitourinary System: To the patients, the kidneys are the major organs of the genitourinary system. They are quick to note urinary changes. It is well to begin by taking a definite history of the patient's urinary program. It is usually impossible to obtain a reliable venereal history from a female patient. However, diplomatic inquiries along that line should be instituted. The possibility of pregnancy, in the case of a woman who is supposedly past the childbearing period, should receive careful consideration. In the case of the male, do not depend upon the patient's observation of the size of the urinary stream, when considering the possibility of stricture.

Nervous System: Questions along this line elicit vague and unsatisfactory replies. A good starting point is an inquiry about the patient's ability to sleep; if a poor sleeper, is it because of pain? What causes excitement? Inquire as to composure, or lack of it; reactions to family and business associates, friends and strangers; headaches; fainting attacks; nagging or scolding. Is the patient melancholy or inclined to view life with equanimity?

Special Senses: The nose has already been considered under respiratory affections. The condition of the eyes and ears, as well as the presence or absence of tactile sensation, should be noted. The entire life history of the eyes and ears should be obtained.

General Findings: Gain or loss of weight

in the past year; weight of the patient at the age of 20; presence or absence of chills or fever in the past year, all should be noted, as well as other unclassified matters.

It can readily be understood that the obtaining of this kind of information can seldom be properly done in one sitting. The time allotted to each patient for obtaining the history and making physical examination should not as a rule, exceed thirty minutes. This means repeated visits by the patient to the hospital. Questioning or examining that extends over thirty minutes is tiring and irritating to both the physician and the patient. Prolonging the time of examination has many advantages. It enables the examiner to pick up threads that he may have overlooked; inspires confidence on the part of the patients and gives them an opportunity to recall things of interest in their history that they may have forgotten. The time taken for the serial examination may be utilized for the administration of medication that may relieve existing symptoms without interfering with the obtaining of necessary information.

PHYSICAL EXAMINATION

The physical examination is begun by recording, the temperature, respiration, pulse, blood pressure, basal metabolic rate, weight, height and normal weight for height and age. In cases where there has been a variation of these figures since the first day of examination, such changes are recorded, giving the dates.

The inspection of the patient is now begun, and the record of it corresponds to the description given by the pathologist in doing an autopsy. The pathologist records what he sees, and leaves his diagnosis until his observations of the body have been completed. The only difference between the clinical examination of a patient and an autopsy is the limitation of things to be seen, felt and heard.

Our first object of scrutiny is the head. The color, amount and condition of the hair is noted. The scalp is examined to determine the condition and presence of scars, either superficial or of such magnitude as to cause adherence to the skull.

Mobility of Scalp: There is a marked difference in the degree of mobility of the scalp in different individuals. Whether it has any more pathologic significance than has the Roman type of nose in one individual and the Grecian type in another,

has been a question for speculation by some physicians. The contour of the skull is examined, mainly to determine the presence or absence of indications of former injury.

The face is always informative, most frequently as an indication of the mental and neurologic condition of the patient. Sometimes it shows the results of nerve or muscle disease. The presence or absence of wrinkles is noted, as well as lesions or scars.

For several years I have been interested in the number of times that deep naso-labial folds are found in individuals with either congenital or acquired syphilis. In fact, I have found it so often that I consider it as important a symptom as the unreliable Argyll Robertson pupil. Note facial inequalities and nerve disturbance of muscles. Note the absence or presence of cyanosis.

Eyes: Examine the eyelids for infection or edema and the conjunctiva for the presence or absence of infection. Note the color, size and equality of the pupils. The sclera is examined for icterus, hemorrhages and subconjunctival fat. Coarse lesions of the cornea are noted. The pupils are examined for their reaction to light and distance, and the presence or absence of scars in the cornea, causing unequal contractions. The eye-grounds are observed and, when occasion demands, a mydriatic is used, but usually sufficient information may be gained without subjecting the patient to this inconvenience and possible danger. The appearance of the disc, the number and size of the vessels and their degree of tortuosity and the condition of the choroid are noted.

Nose: Record the size, shape and deformity, if present, as well as the patency to the ingress and egress of air of each nostril, which is carefully inspected. The condition of the mucous membrane, size of the turbinates and the integrity of the septum are recorded.

Ears: The condition of the auditory canals, freedom from wax, abrasions or furuncles, perforation, retraction or plaques of the drums, the appearance of the cone of light and the mobility of the drum, tested with the Siegel speculum, are noted.

We now proceed to the study of the mouth, the condition of the tongue, deviation and tremor, if present. The gums are carefully examined and their condition noted. The teeth are individually examined, noting color, filling, crowns, decay and hy-

gienic condition. It is a good deal of satisfaction to note the frequency with which these findings are confirmed by the x-ray picture.

Pharynx: The presence or absence of anesthesia, the condition of the pillars, the tonsillar picture and the condition of the posterior pharyngeal wall are included.

The examination of the eyes, ears, nose and throat is supplemented by an examination by a specialist in that line of work. There are three reasons for the double examination: First, the internist should have first-hand knowledge of the condition of these organs; second, it will mean more painstaking efforts on the part of both internist and specialist; third, the frequency in this part of the body of lesions that should receive attention is a very good argument for having the specialist contribute to the history the result of his more capable investigation.

Neck: Note the presence or absence of palpable lymphatic glands; abnormal pulsations; size, consistency and mobility of the thyroid.

Chest: Look for eruptions, front or back; undue prominence of blood vessels; scars, operative or accidental; spinal deformities; equality or inequality of expansion; presence or absence of sub-clavicular depressions and degree of obliteration on deep inspiration; percussion note in different areas; tactile and vocal fremitus; character and time relation of inspiration and expiration, as revealed in different locations by auscultation (usually most important of all); presence or absence of dry or moist rales; and the extent of pleural effusion, pleural thickening or new growths, if any.

Heart: Note the condition of the radial arteries; position, visual and palpable, of the apex beat; presence or absence of thrills. Outline the heart by percussion, when possible, and make a comparison of the apex rate with the pulse rate. Note the presence or absence, transmission and direction of murmurs, making a careful effort to ascertain the presence of aortic systolic murmurs and bearing in mind that, in elderly people, aortic systolic murmurs are commonly found.

Abdomen: The examination includes inspection, noting the presence of eruptions or operative scars, and gentle palpation to discover areas of increased rigidity; the size and position of the spleen and kidneys; the distance of the liver border below the

costal margin; and the complaint of pain. In acute conditions affecting the abdomen, the examiner should refrain from making rough and deep pressure, bearing in mind that in all conditions, normal, chronic or acute, gentle palpation is always most informative. Examination of the external inguinal rings should be made, noting their size and impulse when the patient coughs.

Genitalia: Examine for scars, condition of the epididymis and testicular size and consistency on both sides, in the male. Gumma of the testicles is sometimes found. In male patients with a gonorrheal history, a sound should always be introduced, beginning with a No. 21, French; also make a digital examination of the prostate, noting size, enlargement, consistency and pain reaction.

The examination of the external female genitalia should note the presence or absence of scars, the condition of the urethral meatus and integrity of the anterior and posterior vaginal walls.

In making a bimanual examination of the female pelvis, the bladder should always be emptied immediately preceding the examination, and the examination should discover the condition of the cervix, the mobility and size of the uterus, the relations of Douglas' pouch and differences in size and tenderness of the adnexa. An amazing degree of misinformation is often obtained by the most expert examiners.

Anus: Note the presence or absence of growths, scars or fistulous openings, by digital exploration, supplemented when indicated, by proctoscopic and sigmoidoscopic examinations.

Extremities: Record all scars and tattoo marks; edema of the arms or hands; presence or absence of cyanosis; clubbing of fingers; varices, varicose veins and edema of the legs; presence or absence of edema of the feet; and any deformity.

Nervous System: Test the coordination (finger-to-finger; heels-to-knees); tremor of the extended fingers; patellar reflex; tendo-Achilles reflex; ankle clonus; Babinski and Romberg signs; ataxia; reaction to sharp or dull, hot or cold; abdominal and cremasteric reflexes.

The record is completed by giving the diagnosis and a short discussion.

Treatment is suggested, with no idea of dicating to the family doctor or imposing upon him the examiner's ideas of therapeutic procedures.

Many, many years ago the Mayos initia-

ted the proper method of giving medical service. The apparently healthy individual receives the same scrutiny as does the patient who is sick. "Complete Physical Examination" is a very comprehensive term. Common sense at once suggests that there must be an established minimum of work necessary to be done. The maximum must depend upon the various problems different patients present for solution.

Experience has taught that a complete physical examination means a minimum, that consists of a carefully taken history by a trained physician, requiring in many instances many conferences with the patient; a detailed and written description of what is found, beginning at the top of the patient's head and ending at the soles of his feet.

When the patient is poor, all of this can be done for the price of a suit of ready-made clothes—a price that is not beyond the means of the poor man. When the correct diagnosis for the poor man requires more than the minimum examination here outlined, the fees received from the well-to-do and the wealthy will enable the physicians of each of the hospitals to give the poor man the entire service for the minimum price. It is recognized that there will be a large number of patients where an examination of the spinal fluid is indicated, the administration of a barium meal, a detailed urologic and other examinations by specialists, as well as roentgenograms of various parts of the body. The cost for the necessary minimum and the necessary maximum will be distributed in such a manner that all will receive the best service and none will be overcharged.

The current charges for clinical laboratory and x-ray work are not a criterion of the charges made by the medical departments (in hospitals) that confine their work to complete physical examinations. Most of the highly competent physicians now maintaining private laboratories can find, in these departments, scientific opportunities that will surpass those they now have, without sacrifice of either their scientific standing or their financial returns. The present high charges must be maintained so long as the unnecessary duplication that now exists continues. It is only by doing away with this unnecessary duplication that laboratory and x-ray fees can be reduced to the point that will make possible the giving of a complete service to the rich, the middle class and the poor.

Rational Birth Control

(Its Hygienic, Social, Moral and Economic Implications)

By Joseph E. G. Waddington, M.D., C.M., Detroit, Mich.

FROM England came the liberty-seeking Pilgrim Fathers, and from this same birthplace of the Anglo-Saxon race emanated the modern and scientific development of birth control. An "Essay on the Principles of Population," published by the Rev. Thomas Malthus, in 1798, initiated a controversy which, increasingly through the years, emphasizes the apparently irreconcilable impasse between practical science and religious dogma. Scientific and intellectual development is proportional to the dissipation of superstitious and unscientific beliefs.

"Be fruitful and multiply" was an injunction delivered thousands of years ago, when the land was as sparsely populated as it is now overpopulated; however, it is implicitly believed in today by those to whom it is still an inspired message, which accumulated historical and economic facts cannot invalidate.

A certain theologian recently said: "I have never discovered a contradiction to the inspired words of the mighty Paul, 'A woman shall be saved by bearing children'." This aggressive apostle and his priestly champion could never personally undergo the enlightening experience of being a mother, otherwise both might have realized that innumerable women are damned to untold misery and suffering by bearing children.

He further states: "Population was limited as Almighty God saw fit to limit it—by war and pestilence and disease and famine and the marriage customs and the fecundity of his peoples." If this be the orthodox cure for overpopulation, then the scientist has no apology to offer for rational birth control, in preference to such limitations by Almighty intervention.

Sexual ascetics and sophists, who rigorously believe that matrimony was instituted

by God solely for the procreation of children, and not merely for the pleasure of sexual intercourse, enjoyed independently of the "object of matrimony," unnaturally interdict a natural and lawful satisfaction, unless it is liable to entail a subsequent retributive penalty. They therefore prescribe total abstinence from sexual intercourse as the only permissible measure for natural limitation of the family.

Physicians easily recognize physical disability initiated or accentuated by child bearing, but do not so readily apprehend psychic distress induced by sexual repression and the ever-haunting fear of undesired pregnancy. Much so-called "sexual frigidity" and "nervous irritability" on the part of women is due to a deplorable lack of correct marital understanding on the part of the husbands and of that early and pre-marital instruction in the hygiene of sex, which will best keep out error. Rational birth control should not be restricted to those whose health is so seriously impaired that the added burden of pregnancy would be distinctly dangerous, but should also be available as a preventive of many of those debilitating conditions which increasingly supply material for gynecologic clinics.

Inexorable economic conditions cannot be satisfactorily solved without a practical consideration of rational birth control. The ever-increasing problem of unemployment and its harvest of despairing misery and crime is the complement of increasing population. Overproduction, sooner or later, necessitates a militant extension of export markets, and only a metaphysical casuist will reject judicious limitation of population in place of overpopulation, to be eventually depleted by war, famine, pestilence and other alleged acts of Almighty God.



An English Caravan Birth Control Clinic.

To quote again from our orthodox philosopher: "Birth control is a subject that should never be mentioned in decent society". Even in the ultra-conservative Victorian age, Queen Victoria herself wrote thus, pertinently, to the king of the Belgians: "I think, dearest uncle, you cannot really wish me to be the '*mamma d'une nombreuse famille*,' for I think you will see the great inconvenience a large family would be to us all, and particularly to the country, independent of the hardship and inconvenience to myself. Men never think, at least seldom I think, what a hard task it is for us women to go through this very often."²

BIRTH CONTROL VERSUS ABORTION

Rational birth control has nothing in common with abortion, but should be recognized and conveniently available as a legal and healthful preventive to such a desperate and disastrous but popularly prevalent measure.

In 1878, in Holland, free contraceptive advice was given to poor women. About thirty years later a private clinic was instituted in South East London. In 1915, Margaret Sanger's visit to England aroused fresh interest in birth control, which shortly thereafter found a new leader in Dr. Marie Stopes, who was the first to use the phrase, "constructive birth control." In 1916, Mrs. Sanger opened a birth control clinic in New York City, for which she was rewarded by arrest and imprisonment³. From thence forward, despite fanatical opposition, the birth control movement rapidly developed and spread throughout the world. Medical, religious, educational, and other public-spirited organizations, which are not so orthodox-minded that their "sun of reason is set for ever," are increasingly indorsing a rational birth control which, by freeing woman from her inferior position as a passive instrument of man's desires, elevates her to a rightful equality, whereby she herself may unrestrictedly determine when and when not to assume the burden of child bearing.⁴

There are many popular contraceptive devices and measures that have been and are more or less fallaciously utilized by those who, in addition, breathe a prayer or two and thus, ever sick with fears, yet hopefully continue until the inevitable inefficacy of

it all reveals that "what is done cannot be now amended." An expertly fitted membranous diaphragm, lubricated with an effective but non-irritant spermicide, which mechanically and absolutely occludes the os uteri and thus prevents the ingress of the spermatozoa, is scientifically and hygienically correct in principle. This combination "provides at least an approach so close to a one hundred percent contraceptive method as to warrant placing in it a large measure of confidence."⁴ The patient, having been thoroughly instructed by her physician how to insert and to remove the diaphragm accurately, is then in a position to determine when she shall or shall not assume the responsibility of pregnancy.

The gynecologic examination necessitated as the initiatory step toward securing adequate contraceptive attention presents an exceptional opportunity for early recognition and amelioration of unhealthy local conditions which, otherwise, might easily develop into cancer and only be discovered when too late for satisfactory treatment. Upon the medical profession, first and foremost, devolves the task of instruction in building a wise and vigorous race by eliminating the unfit.

Crime, disease, poverty, and social unrest, although by no means entirely dependent, are, nevertheless, very frequently contingent upon unrestricted procreation. Judiciously spacing the advent of children is to the best interests of mother and child and to the economic and cultural benefit of the individual and the nation.

The solution of the vital, universal problem of propagation by the unfit and the morally and physically diseased and incompetent, and the compulsion by the "submerged tenth" to a rabbit-like multiplication, irrespective of inability to secure sufficient and proper prenatal nourishment and care, is a matter of common sense—of rational birth control—and not a subject for vapid theorizing and supernal abstractions.

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110 Atkinson Avenue.

Notes From the A. M. A. Meeting

Reported by George B. Lake, M.D., Chicago

THE eighty-second annual meeting of the American Medical Association, which was held in Philadelphia, Pa., June 8 to 12, 1931, was the most successful assembly in many years, if not in the history of the Association. Few cities possess a structure in which the great technical and



Dr. Edward H. Cary,
President-Elect of the A.M.A.

scientific exhibits can be adequately presented under the same roof with the meeting places for the various sections, but the new municipal auditorium, whose completion was rushed in order to make it ready for this occasion, provided ample and well-arranged space for everything. The only drawback was that the auditorium is several miles from the hotel district (out near the University) and the transportation system of Philadelphia is a bit unsatisfactory, according to modern standards, especially when it rains, as it did one entire day.

Philadelphia is a city rich in historic landmarks, whose narrow streets are, in many places, still lined with the same houses from whose windows people looked out upon Benjamin Franklin and other great figures of his generation, and later upon Silas Weir Mitchell, the second most famous citizen of the metropolis of Pennsylvania.

It is becoming increasingly the custom of other societies to hold their meetings during the first day or two of the A.M.A.

session, and this year the list of such side issues included gatherings of the Association of Industrial Physicians and Surgeons, the Physical Therapy Association, the Heart Association, the Proctologic Society, the Radium Society, the Medical Veterans of the World War, the Associations for the Study of Allergy and of the Internal Secretions, and several others, before all of which matters of moment were presented, though, of course, no one individual could possibly have attended them all.

The recreational features included, as usual, the tournament of the American Medical Golfing Association, in which Dr. G. J. McKee, of Pittsburgh, turned in the low gross score (167) for thirty-six holes and Dr. S. E. Stokes, Moorestown, N. J.,



New Philadelphia Municipal Auditorium Where the Sessions Were Held.

the low gross (82) for eighteen holes. The annual reception and ball for the president was one of the most brilliant and enjoyable in years; and a supper dance at the Bellevue-Stratford Hotel, in honor of the Woman's Auxiliary, was also a very delightful affair.

From the meetings of the House of Delegates emerged diatribes against State Medicine and pronouncements against certain forms of groups for delivering or procuring medical services, which may or may not be in line with sound ethical and economic policy.

Dr. Edward H. Cary, of Dallas, Texas, dean-emeritus of Baylor University College of Medicine, was selected as the new president-elect without a dissenting vote; Dr. E. Starr Judd took the gavel for the ensuing year; and New Orleans was selected as the place for next year's meeting.



Fig. 1.—Plaster of Paris Bandages (Note: The plaster is contained in an ordinary kitchen mixing bowl, inverted upon the bandage).

THE SCIENTIFIC EXHIBIT

Never has the scientific exhibit been more varied and instructive nor better arranged. The aisles were wide enough to accommodate the crowds which filled the exhibit hall every day; and a central rest-room was provided for those who were worn out by

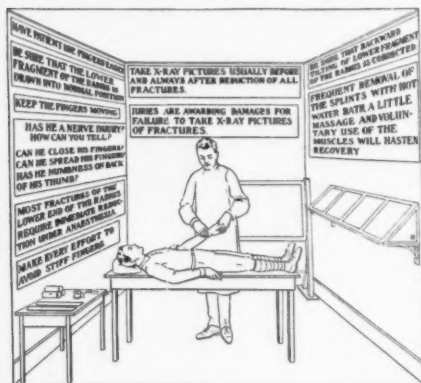


Fig. 2.—Diagnosis and Management of Fractures.

the tiring job of looking at things in the 191 booths.

In Class I (individual investigations), the gold medal was awarded to Dr. Jacob Furth, of the University of Pennsylvania, for his work on experimental leukemia in mice; the silver medal to Dr. Bedford Shelmire, of Baylor University, Dallas, Tex., and W. E. Dove, U. S. Bureau of Entomology, for original work on the spread of typhus fever by the tropical rat-mite; and the bronze medal to Dr. Eliot R. Clark and a group of workers, from the U. of Penn. School of Medicine, for the demonstration

of the growth of living tissues by means of experimental chambers introduced into the ears of rabbits.

In Class II (not purely research work) the gold medal went to Drs. J. P. Schaeffer and W. B. Davis, of Jefferson Medical College, for models of the embryology, development and anatomy of the paranasal sinuses; the silver medal to Dr. H. S. Martland and a group from the medical examiner's office, Essex Co., N. J. and Bellevue Hospital, N. Y. C., for an illustration of radium poisoning in the manufacture of luminous watch dials; and the bronze medal to Drs. Walter Freeman and Karl H. Langenstrass, of St. Elizabeth's Hospital, Washington, D. C., for a remarkably well selected and beautifully mounted collection

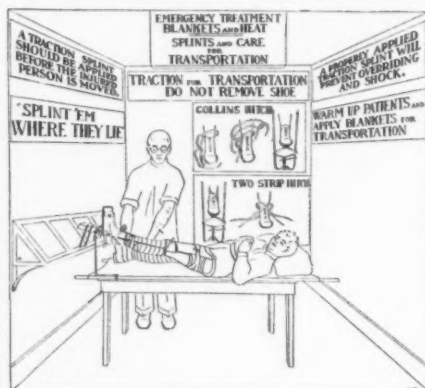


Fig. 3.—Emergency Treatment of Fractures.

of specimens showing the gross pathology of the brain, with moving pictures giving a correlation with the clinical findings.

The demonstration of the treatment of fractures was a particularly instructive feature, especially for general practitioners, and sketches of several of the booths are reproduced herewith, while others, having to do with the after-treatment, will be shown in the department of *Physical Therapy and Radiology*, as spaces permits.

There was also a booth where the various features of the treatment of varicose veins, including the indications and contraindications for the injection treatment, ligation of the saphenous vein and radical excision; the types of solution used; dangers and end-results; etc., were shown. The chairman of the committee in charge of this exhibit was Dr. Géza de Takáts, of Chicago.

Drs. H. L. Stitt and C. E. Wooding, of Cincinnati, showed, by animated diagrams,



FIG. 4.—Emerson Portable Oxygen Tent.

the technic of bronchial lavage with hypertonic salt solution (the Bledso-Fisher modification of Ringer's solution), and by roentgenograms demonstrated the clinical results of such treatment.

Dr. Francis V. Gowen, of the University of Pennsylvania, presented charts and diagrams of the nerve supply of the tonsil and of a method of injection of a local anesthetic, whereby a painless and practically bloodless enucleation can be performed.

The exhibit of paleopathology, by Dr. Frank B. Young, of Gering, Nebr., showing that bone diseases, including productive arthritis, osteomas and dental infections, much as we see them today, existed among the animals which roamed our western plains several hundred thousand years ago, was peculiarly interesting and well presented.

The treatment of osteomyelitis by the use of live maggots, as proposed by the late Dr. Wm. S. Baer, of Johns Hopkins University, has now been established on a sound basis, and an exhibit of the newest methods for growing and handling these larvae was a feature of special interest to orthopedic surgeons and others who treat this disease.

Several pages could be filled with descriptions of the valuable material which was shown in the scientific exhibit which, alone, is worth the expense, in time and money, of attending a meeting of the A.M.A.

In the corridor outside of the hall of scientific exhibits, but not officially one of them (though it should have been), Francis Carter Wood, Jr. was showing, under the auspices of the Chemical Foundation, a highly instructive moving picture film depicting the laboratory technic of the

handling of animals for cancer study and the behavior of normal and neoplastic cells, as seen under the ultramicroscope, before, and after the application of radium emanations. This latter part of the exhibit resembled the famous Cinti film and, when developed more fully, bids fair to rival it in interest. The Chemical Foundation is now directing its large powers and resources toward the study and eradication of cancer. Dr. Geschickter, of Baltimore, spent much time in the Chemical Foundation booth and has promised to write a series of articles for CLINICAL MEDICINE AND SURGERY.

THE TECHNICAL EXHIBIT

Never at any medical convention has the interest in the technical exhibit been so keen and so persistent as it was at this one;



FIG. 5.—Barach-Davidson Oxygen Tent.

and never has it been better rewarded. Commercial firms, to the number of 190, showed and demonstrated their products to those in attendance. This feature, too, is enough to make it worth any physician's while to attend this meeting, to get in touch with all the newest drugs, instruments, apparatus, books and methods, which are being offered to the medical profession, to help its members in their work.

Oxygen-inhalation therapy was given thorough publicity by the showing of the Barach portable oxygen chamber, which sells for \$850 or may be rented by the day or week, with full service, and also of several portable oxygen tents, two of which are illustrated here.

Merck and Co. had set up a small but complete and professional pharmacy, operated along strictly modern lines, which would open the eyes of many physicians and pharmacists to the possibilities along this line. We hope to present to our readers, later, a story of this exhibit, by the man who arranged it.

Acidophilus milk has a definite place in therapeutics, but its taste is decidedly objectionable to many patients who need it. Studies in the research laboratories of National Dairy and Sharpe and Dohme have shown that, when concentrated cultures of *B. acidophilus* are added to high-grade sweet milk containing an excess of lactose, its taste is not altered for a considerable time (if it is properly refrigerated), while its therapeutic properties are high. This product is now available in many places as Supplee Sweet Acidophilus Milk.

Difficulties have been encountered, in the past, in applying radium or radon for the treatment of superficial lesions, but most or all of these seem to be overcome by the use of the plastic wax applicators which were developed in France but are now presented to the American medical profession by the Radon Co., Inc., of New York. The wax comes in sheets, which can be cut and molded to fit the part to be treated, the radium or radon being placed, in proper filters, in the thickness of the applicators.

The woods have been ringing of late, with acrimonious aspersions regarding the purity of the ergot offered to the medical profession. Sandoz has prepared a purified tartrate of ergotamine, for oral or parenteral use, which is marketed under the name of Gynergen. Other somewhat similar products will soon be available.

It is often important to know the exact length of a stomach tube, drainage tube or catheter which is within a patient's body. This fact can now be readily ascertained by the use of the *calibrated tubing*, which was shown for the first time by the Orrsell Company, Inc., of New York City. These people are also making self-inflating rubber ring cushions and drainage pads, which obviate the unhygienic practice of blowing up these devices with the mouth, as well as rubber silencers for pails, garbage cans, etc.

Siebrandt was showing an apparatus for the treatment of all types of leg fractures, which seems to be about as near self-contained and fool-proof as anything which has so far been offered to the profession.

The L. C. Smith and Corona Typewriters Co. offered free stenographic service to physicians, at the booth where their machines were demonstrated.

No one must get the idea that this brief sketch is a picture of the splendid technical exhibit. I have merely selected a few of the *newest* offerings, as a sample of the

good things which are always in store at these gatherings. Many of the less recent drugs and instruments are unfamiliar to most physicians, and are often of even greater interest than things which are shown for the first time.

ABSTRACTS OF ADDRESSES AND PAPERS

THE PHYSICIAN AND THE PUBLIC

(Presidential Address)

By E. Starr Judd, M.D., Mayo Clinic
President of the A.M.A.

There was a time (and it is not, unfortunately, entirely past) when doctors took pride in using, before their patients, long, technical words, preferably in Latin, in order to maintain an air of professional mystery. It is this mysterious atmosphere, in which Medicine has so long been shrouded, which enables the charlatans and cultists to continue their irregular practices.

Medicine is rapidly becoming, more and more, an exact science. The researchers are bringing important matters to light, but they are inclined to feel that their discoveries are an end in themselves and to leave the practical application of the new knowledge to the clinicians who, too often, are slow in making use of it.

The time has come when the veil of mystery which has been a part of medical practice must be drawn aside. The public is eager to know what is going on, and we should be just as eager to tell them. In fact, the education of the public is now one of the most important duties confronting the physician.

Public lectures on health and other popular medical subjects, sponsored by medical organizations, are now among the foremost obligations of the local and county societies. Abstracts of these lectures should be published in the local papers, which have shown entire willingness to cooperate in this way. The consensus among medical leaders is that some sort of publicity should be arranged, whereby the people will be made to understand the nature, purposes and results of the efforts which are being made by scientific medicine toward the prevention and control of disease. Organized Medicine must adjust its relationship with the public.

Merely to keep abreast of the progress in strictly medical lines is not enough for the modern physician who, as an important member of the body politic, should be

familiar with the changes in the social and industrial structure of the nation, in order that he may be an intelligent mold of public opinion.

Some plan must be devised whereby the general practitioner can continue to function in these years of transition, for his intimate knowledge of his patients makes him the one best qualified to manage the great majority of cases of illness. His obligations are heavy, and no person in our social structure so greatly requires character, industry and a deep appreciation of his moral responsibilities as does the family physician.

ALLERGY AND THE INTERNIST*

By Joseph L. Miller, M.D.,
Professor of Medicine, Rush
Medical College, Chicago

Migraine is now fairly generally recognized as an allergic disease, and its exciting cause is almost always the ingestion of chocolate, and can frequently be relieved by subcutaneous injection of Armour's peptone solution (which does not cause severe reactions), in doses of 5 minims, increasing to 25, given twice a week.

The eczemas are almost as frequently initiated by eating fish or shell-fish.

A patient under my care suffered from these two symptoms, plus attacks of coldness and numbness in the hands and feet, followed by cramps in the calves and a profuse, watery nasal discharge, all of which symptoms pointed to allergy as a cause.

The two basic symptoms disappeared promptly when chocolate and fish were omitted from the diet, but the others continued until it was found that they were associated with certain perfumes, and ceased when these were eliminated from the environment.

Menstruation and pregnancy exercise profound effects upon allergic manifestations.

Intermittent hydrarthrosis is periodic (I knew a man whose attacks came on, so severely that he had to use crutches, regularly every thirteen days) and allergic. Most commonly it affects the knees and the

joints of the hands, and can frequently be relieved by the non-specific effects of intravenous injections of typhoid vaccine.

Allergic manifestations are often entirely stopped, for a longer or shorter time (though they are occasionally made worse), by the occurrence of an acute, infectious, febrile disease, like pneumonia or typhoid (non-specific desensitization). Hippocrates said that epileptic seizures frequently ceased during an attack of malaria, and sometimes during pregnancy. This is often seen today. Migraine is sometimes relieved for months or years in this manner.

I knew a patient, who had suffered for years with asthma, whose paroxysms ceased entirely for six weeks, during the progress of an acute thoracic empyema, and returned when that infection was cleared up.

Epileptic attacks may be caused by eating shrimp or crab meat.

The physician who does not think of possible allergic reactions in his intractable cases, is doing his patients an injustice.



Hahnemann College and Hospital.

CLINICAL VALUE OF BLOOD-CHEMISTRY TESTS

By Rollin T. Woodyat, M.D., Chicago

In studying blood-chemistry determinations, we must remember that other factors, aside from the mere concentration of certain solids in the blood stream, are to be considered. We must think of the total quantity in the blood and other tissues, of the rate of consumption and excretion, etc., and must know the various circumstances and relations which influence all these things.

When a substance enters the body it may be disposed of in three ways: excreted; chemically changed; or retained in the body in its original form. If S represents the supply ingested; R the amount retained in its original form; E the amount eliminated (changed or unchanged); and C the amount chemically changed and not excreted, the formula would read: $S = R + E + C$.

The more of any substance present in the blood and other body tissues, the higher

*From an address before the Association for the Study of Allergy, June 8, 1931.



Philadelphia College of Pharmacy.

will be its concentration in the blood and lymph. The volume of the blood varies little from time to time, but the combined volume of the blood and lymph is subject to marked fluctuations in the latter, under the influence of dehydration, massive ascites and the like, and these variations may exert a decided influence upon the concentration of any particular substance in the blood.

In order to gain any truly definite idea of the metabolism of any substance, we must measure the rate of supply and elimination and figure the degree of retention and utilization, as we study the glucose metabolism in a case of diabetes.

CORTIN

By Drs. W. W. Swingle and J. J. Pfiffner,
Princeton, N. J.

From 1 kilogram of adrenal cortex, 93 mgm. of adrenalin-free cortin (1 part of adrenalin to 2,000,000 parts of cortin) can be extracted.

A group of adrenalectomized cats lived an average of nine days without treatment. The members of a similar group of similar cats, kept under exactly comparable conditions, except that they received regular doses of cortin, gained in weight and were alive and well at the end of 100 days; but when the cortin was withdrawn, with no other change in the conditions, all of the animals died in an average of ten days.

THE TREATMENT OF SYPHILIS

By Paul A. O'Leary, M.D., Rochester,
Minn.

Malaria therapy can prevent, as well as improve, the symptoms of paresis. The mortality due to this treatment is 0.2 percent. The remissions (based upon the restoration of the power of self-support) amount to 54 percent.

When a parietic patient, under treatment with malaria, shows a fall in his systolic blood pressure to 100 mm. of Hg., with a sharp rise in his blood-urea, give quinine

at once, to stop the paroxysms.

In about 60 percent of tabetic, and in many parietic patients, the blood-Wassermann test is negative; but even in asymptomatic paresis, the spinal fluid findings are positive.

In cardiovascular syphilis and luetic involvement of the internal organs, give vigorous, classical antisyphilitic treatment, along with malaria.

Patients who develop neurosyphilis after vigorous arsenical treatment, do so, not because the arsphenamine used lacked potency, but because the patient's resistance to the disease was low. In such cases it is well to give pyretotherapy, with malaria or diathermy, along with the arsenic.

Arsenic has a tendency to damage the liver and may be dangerous to use in patients, with acute or late syphilis, who are showing symptoms of disorders of the liver. In such cases, mercury or bismuth preparations should be used, instead of arsenicals.

MASSIVE DOSES OF LIVER EXTRACT

By Joseph E. Connery, M.D., New York
City

Patients with pernicious anemia, who are under treatment with liver extract, frequently find it difficult to take the proper doses at the proper intervals.

In attempting to adjust matters for these patients, it was found that the indicated dosage, for a 10-day period, for example, can be given at one time, with satisfactory results. As much as 30 to 50 vials of liver extract (equivalent to 3,000 to 5,000 grams of liver) have been given at one dose.

Six patients, none of whom received any fresh viscera in their diets, were treated in this manner, and all showed a satisfactory increase in their red cells and reticulocytes.

MENTAL HYGIENE AND THE PHYSICIAN

By Lloyd H. Ziegler, M.D., Albany, N. Y.

In the past, and even now to a considerable extent, the mental hygiene movement has been allied with various social agencies, rather than with the medical profession, except, of course, the neuropsychiatrists.

It is equally striking to note how rarely papers relating to mental hygiene or to psychic disorders appear on the programs of medical societies. While it is true that certain of the problems in mental hygiene



Jefferson Medical College, New Building.

fall outside of the orthodox concepts of health and disease, it is equally true that many of these problems are a vital factor in the condition which makes the individual a patient, and should become known to the family physician long before they could come to the attention of a social worker, a minister or a teacher. In spite of this, few physicians are seriously interested in mental and emotional disorders, though a careful study of these factors should be made in every case seen.

Every medical school should include in its curriculum a strong course in neuropsychiatry, laying special stress upon the curable psychic maladies and the means of handling them successfully. This is especially true in view of the fact that people, particularly in the United States, are living so hard and so fast that such disorders are increasing. Every physician should be able to estimate the psychic resources, as well as dangers, of every patient who comes to him.

DISCUSSION

Dr. Bronson Crothers, Boston: The general practitioners and the pediatricians are the men who should have a sound general knowledge of the early symptoms of psychic disorders, and they look to the psychiatrists for instruction, but generally do not receive the type of information which would be most useful to them.

Dr. Tom A. Williams, Florida: If practitioners and pediatricians would call psychiatrists in consultation more frequently, in their doubtful cases, they would learn

how to handle these patients successfully, when that is possible, and when to refer them to a specialist in this line for management.

Dr. George B. Lake, Chicago: The highest success in the prophylaxis and treatment of chronic diseases depends upon early diagnosis and prompt and intelligent attention. How far would we have gone in the campaign against tuberculosis if it had been considered disgraceful to have the disease and indelicate even to discuss it? How far have we actually gone in our campaign against venereal diseases, where these conditions largely obtain, even now?

Our efforts in the line of mental hygiene will be more or less abortive until we have educated the people to the point where they can talk about disorders of the mind as freely as they do about diseases of the body.

PSYCHIC FACTORS IN VISCERAL DISORDERS

By Theodore H. Weisenberg, M.D., Philadelphia

When careful studies are made of psychiatric cases, underlying visceral diseases are often found, overshadowed by the great preponderance of "functional" manifestations. It is difficult to bring to light the symptoms of an organic lesion, particularly in its incipency, if the patient has had several "nervous breakdowns" and presents a bizarre subjective attitude and definite aberrations of personality.

Cardiac disorders are frequently of emotional origin and are often initiated by careless and unduly loquacious physicians. Patients with pseudo-angina are liable to become neurotic, and when this happens the organic lesion is easily overlooked.

Pulmonary disorders often have marked psychic factors. The euphoria of the tuberculous patient with a lesion in the upper chest, and the depression which occurs when the process involves the base of a lung are well recognized. Moreover, toxic tuberculosis causes definite psychic symptoms. Women with tuberculosis and cancer of the lung have often been diagnosed as neurotics.

The gastrointestinal system is peculiarly susceptible to emotional effects; but, on the other hand, organic diseases are frequently diagnosed as neuroses. Such mistakes are made because of inadequate physical examinations and by assuming that a patient is

psychoneurotic because he has a weird and varied group of subjective symptoms.

To avoid such errors, a careful history, including the accurate chronology of the disease, must be obtained from the patient, his family and his friends. A thorough study of the blood and urine should be made upon every case seen. The psychiatrist should not undertake to go into a case from the psychic standpoint until he has sufficient knowledge of the patient's physical condition to see the *whole man*.

It is well to bear in mind that every disease has both physical and psychic components, and that a patient may have an organic disease and a psychoneurosis at the same time.

DIET IN THERAPY

By Russell M. Wilder, M.D., Chicago

We shudder at the dietetic crimes which were committed upon diabetic patients a decade ago. The diets now used in these cases are far more intelligent and include enough fruits and vegetables so that carious teeth are little more common than they are in normal persons. The bad results, in the past, came from the *unbalanced diet*.

Diets for weight reduction are often ill-considered. These, too, must be balanced. We must figure the patient's energy output carefully, and then feed him slightly less than enough to replace it, including plenty of protein.

"SANE" OBSTETRICS

By H. J. Epstein, M.D., New York City

The morbidity rate, when operative measures are resorted to in obstetrics, as compared to the non-operative management of these cases, is 5 to 1; the maternal mortality is 30 to 1; and the fetal mortality is 3.6 to 1. The female of the species is not dedicated to the practice of operative obstetrics. The rational use of morphine, and intelligent help, given at the proper time, can greatly reduce the necessity for operative intervention.

Out of 1,569 deliveries there was an operative incidence of 9.1 percent. Cesarean section was performed only 6 times (4 per thousand). Operative intervention was used in only 2 of 58 cases of breech presentation. The maternal mortality in the entire series was 2.54 per thousand and the fetal mortality (stillbirths, macerations and neonatal deaths), 31 per thousand.

Rigid antepartum care resulted in an incidence of true eclampsia in only 5 per thousand. Patients with cardiac lesions, of whom there were 14, were all conducted through their pregnancies without mishap to mother or child.

We must educate the relatively incompetent obstetricians to realize their limitations, and the competent but overenthusiastic ones to recognize the fact that the women of today are just as well able, physically and mentally, to bring children into the world as were their mothers and grandmothers.

The Anterior Pituitary and Sex Development

By L. R. Darling, M.D., Mt. Vernon, N. Y.

THE work of Froehlich seems to point to metabolic disturbances as the factor which underlies a large proportion of sex disharmonies met with in practice, and when once this metabolic factor is settled as the cause of normal sexuality and of sex reversals, its value in the treatment, as well as in the diagnosis of abnormal sexual conditions, should be of great value.

There is much evidence that changes in the metabolism, up to the time of puberty, and even in later life, induced by castration or some other cause, may start changes in an opposite sex direction or bring about

sex reversals. Changes in the sexual character after puberty are more common in females.

Unquestionably the thyroid, pituitary and suprarenals, as well as the gonads or sex glands, are all involved in the process of metabolism, so it seems almost futile to discuss functional alterations of one of the endocrine organs separately, for the others participate by involvement in the changes, through an attempt to compensate for the functional disturbance of the diseased organ. It is frequently impossible to prove, in any one of the so-called endocrine diseases,

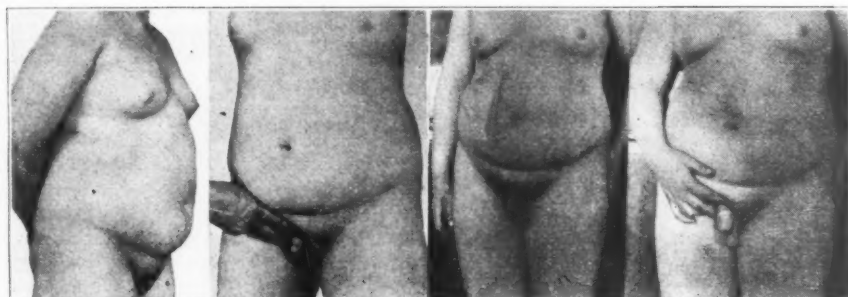


Illustration of the Development of the Sex Organs of a Young Man Under Treatment with Anterior Pituitary Substance. Photographs Made at Intervals over a Period of Years.

whether the symptoms are brought about by the alteration of the organ which is presumed to be originally affected, or are due to the participating of one or more of the other endocrine glands.

It has been proven that a specific action of both the ovaries and testes is affected by something contained in the anterior pituitary; while the adrenals seem antagonistic to the pituitary.

Froehlich's work showed that disordered functions of the pituitary give rise to two different sets of symptoms, accordingly as the disorder is one of undersecretion, (hypopituitarism) or oversecretion (hyperpituitarism), both directly traceable to metabolic disturbances, in which the close interrelationship between the pituitary and the other ductless glands is evident. There are striking similarities between the symptoms following pituitary ablation and those of *dystrophia adiposa genitalis*.

The age and sex of the individual both play an important part in the clinical picture. The lack of growth-principle of the anterior pituitary may give rise to an element of stunted growth, as well as to various other symptoms. We find the adrenals are exceedingly small in pituitary dwarfism.

Cases have frequently been diagnosed as

hypopituitarism, and spontaneous improvement in genital development has occurred, although the deficiency of the genitals was merely a retarded puberty. No spontaneous results are possible in dealing with true metabolic processes.

It seems evident that fat metabolism is regulated by more than one single endocrine gland, and it is safe to say that the pancreas is one of the most important among those concerned.

Hormones of the anterior pituitary, when properly administered, have already made sexual maturity possible in the rat, mouse and bird, and work with the human infant is now being carried on.

I beg to submit photographs of a youth who was treated with anterior pituitary substance (2 grains—130 mgm.—thrice a day for four weeks; then an interval of a week, followed by a repetition of the course), together with weak irradiations, and photographed at intervals, which covered several years.

Although marked changes occurred, in both the primary and secondary sex characteristics, descent of testes and growth of pubic hair, as well as an increase in the size of the penis, little change occurred in the fat deposits.

60 Broad Street.

ANTHROPOLOGY

When the physician fixes his attention upon the study of Man, he becomes an anthropologist, and medicine, his province, no longer limited to a study of the world about him, turns out in truth to be a portion of the science of anthropology.—GEORGE DRAPER, M.D., in "Disease and the Man."

Tularemia

("Rabbit Fever")

By Charles Rudolph, M.D., New York City

TULAREMIA can no longer be regarded as a rare disease. While, up to 1924, but 15 cases in human beings had been reported, over 900 cases have now been reported, altogether, including a number of cases in nearly every state of the Union, except the New England states; 61 cases during a period of one and a half years in one community (Dayton, Ohio) alone. These facts have led to the inevitable conclusion that tularemia is a widespread and common disease of man, and that it is frequently confused with other diseases.

In various parts of the country the malady is called by local names—"Francis' disease," "deer-fly fever," "plague-like disease of rodents," "conjunctivitis tularensis," "rabbit disease," "glandular type of tick fever," "Ohara's disease," etc.

Tularemia is in every respect "the first American disease." To American investigators alone belongs the credit for the discovery of the specific etiologic agent, the determination of the modes of transmission from animal to animal and from animal to man, the complete descriptions of its clinical manifestations and its pathology and bacteriology.

In 1911, Coy and Chapin, of the United States Public Health Service, isolated a new organism from ground squirrels dead or dying of a "plague-like" disease in Tulare county, California. They gave to the organism the name *Bacterium tularensis*, after the county in which their discovery was made.

In 1914, 1915 and 1917, respectively, Vail, Sattler and Lamb, all ophthalmic surgeons of Cincinnati, described the first cases of *Bacterium tularensis* infection of the human eye.

It remained for Edward Francis, of the United States Public Health Service, to point out the unity of the "plague-like disease" of rodents and "deer-fly fever" of man^{1,2}. In 1919, Francis established a field laboratory at Delta, Utah, and succeeded in isolating *Bacterium tularensis* from seven human individuals.

Tularemia has now become a world-

wide, recognized new disease of man and has taken its place in the medical literature of every country. It exists, primarily, as an infectious disease of wild rodents, particularly rabbits. Among these animals it occurs in nature as a fatal bacteremia, due to *Bacterium tularensis*. Recently it has been found also among sheep, muskrats, opossums, water rats and game birds. The dog and the silver fox, however, apparently possess a natural immunity. The wide distribution of the disease in nature, in a great variety of animal hosts, and its great variety of insect hosts, assure its perpetuation over an ever-widening area of distribution and forecast a steady increase in the number of human cases, because the disease affects man secondarily, as a result of direct contact with the tissues or body fluids of an infected animal or as a result of indirect transmission from animal to man by certain ticks or flies.*

Postmortem examination, in the most rapidly fatal case of tularemia in man on record (four days and seven hours), provided an opportunity to study the early gross and microscopic manifestations of the disease. The characteristic "spotted spleen" and enlarged, caseous regional lymph nodes were found. The liver revealed evidence of focal necrosis.

The alertness of the American physician is illustrated by his ability to diagnose his first case of tularemia from reading descriptions of it in medical literature alone, never having seen a case previously. This has repeatedly taken place in thirty-nine states and the District of Columbia. The certainty of diagnosis by agglutination is scarcely equaled among other diseases. Indeed, most of the recorded cases were recognized by general practitioners who had never seen a single case of the disease. By

*There is no evidence that the disease has been acquired by the ingestion of the meat of rabbits infected with tularemia. Freese and Lake have shown, however, that the disease can be produced experimentally by the inoculation of guinea-pigs with insufficiently cooked meat of a tularemia rabbit. *Bacterium tularensis* is relatively thermolabile. It succumbs in ten minutes, in cultures and splenic tissue, when heated to 55° to 58°C. There is no evidence either that the disease is contagious from man to man.

agglutination tests, tularemia is easily distinguished from diseases with which it could be confused, such, for instance, as influenza, typhoid fever and streptococcus infections.

A mortality of nearly 4 percent, a slow convalescence in many cases and the occurrence of suppurative or granulomatous late lesions, with attendant prostration and debility, emphasize the seriousness to the individual contracting this infection.

CLINICAL MANIFESTATIONS

Walter M. Simpson, M.D., director of diagnostic laboratories, Miami Valley Hospital, Dayton, Ohio, the physician who has had the greatest clinical experience with tularemia of any American observer, writes, *inter alia*, as follows:

"Tularemia shows remarkable seasonal variations east and west of the Mississippi river. In the western states, the onset of the human cases corresponds to the season of greatest activity of the wood ticks (March to August) and the deer flies (June to September). Furthermore, jack-rabbits are found almost exclusively west of the Mississippi river and no laws prohibit their destruction. Human cases caused by direct contact with jack-rabbits occur during the spring, summer and early fall. East of the Mississippi, however, the situation is entirely different. Here the occurrence of the disease is almost entirely restricted to that period of the year when the state game laws permit the hunting and marketing of wild cotton-tail rabbits; namely, November, December and January. Every individual in the Dayton series acquired the infection during November."

Analysis of the recorded cases indicates that there are four distinct clinical types of the disease:

1.—*Ulceroglandular type*. Two-thirds of all the reported cases fall into this group. The primary lesion usually begins as a papule, which develops at the point of inoculation. The papule rapidly becomes painful and swollen and suppurates in the center. Within a day or two after the onset of the illness, painful swellings develop in the regional lymph nodes. The lymphadenopathy quickly assumes large size, the average size being that of a lemon. The ulcer heals very slowly and healing is apt to be greatly delayed, if the primary lesion is incised.

In some cases there is no visible primary lesion. In 9 of the Dayton cases, the most careful scrutiny of the fingers and hands revealed no grossly visible papule or ulcer. There is abundant clinical and experimental evidence to show that *Bacterium tularense* may pass through unbroken skin.

2.—*Oculo-glandular type*. In these cases

the primary localization is in the conjunctiva, usually as a result of touching the eyelids with contaminated fingers.

3.—*Typhoid type*. In this type there is no primary lesion and no regional adenopathy. Fever is the outstanding symptom. In many cases it closely simulates typhoid fever. Most of the cases occurring among laboratory workers were of this type. Twenty (20) such cases have occurred among research workers engaged in investigating this disease. In 1915, during the course of Hachiro Ohara's investigation of tularemia, in Japan, his wife volunteered in order to help prove the scientific convictions of her husband. Even though the infectious material, gently rubbed into the back of Madame Ohara's left hand, was washed off with soap and water twenty minutes later, she promptly acquired the disease. This stands as the only record of the transmission of the disease to a human volunteer.

4.—*Skin eruptions* of various types (macular, maculo-papular, papular, papulopustular, erythema multiforme-like and scarlatiniform) have been reported in 32 instances.⁵

DIAGNOSIS

The most important factor in the diagnosis of tularemia is to have the disease in mind. The history of contact with wild rabbits, followed in two or three days by the development of an indolent ulcer, usually at the site of the injury produced by a sharp fragment of rabbit bone, regional adenopathy and onset symptoms of an influenza-like character, present presumptive evidence of a tularemic infection. The most common errors in diagnosis have been to consider that the disease was due to streptococcus infection or typhoid infection. The development of nodular lymphangitis has led to a mistaken diagnosis of sporotrichosis.

The proportionately higher titer reached by tularemia agglutinins and the employment of agglutinin absorption tests leave little doubt as to the diagnosis.

The simplest and best method for obtaining confirmation of the clinical diagnosis is to collect 4 or 5 cc. of the patient's blood, exactly as one collects it for the Wassermann test. Either the serum or the whole blood may be sent to any laboratory which has on hand the necessary *Bacterium tularense* antigen for agglutination reactions. This test is highly specific. The agglutin-

ins appear, sometimes, during the second week of the illness. It is, therefore, useless to collect the blood during the first week or ten days. The titer reaches its maximum (1:1280 to 1:2560) from the fourth to the seventh week, followed by a gradual decline until, at the end of the first year, the average titer is about 1:140. The final agglutinating level to which most cases of long duration seem to come is 1:40. Experience of all investigators is in accord, that agglutinins have never entirely disappeared from any case; that subsequent exposure to infection does not tend to elevate a tularensis titer acquired by the original attack; and that one attack of the disease confers permanent immunity.

TREATMENT

The most important phase of the treatment is *prophylaxis*, and this is best accomplished by education of the market men and the laity in general as to the dangers of the infection and the manner in which

it is acquired; by urging thorough cooking, to destroy the infective agent; and by a warning that all individuals who handle wild rabbits should wear rubber gloves.

As yet, no specific treatment has been developed, though Dr. Simpson is trying to develop an effective serum. Treatment is essentially symptomatic. There is no reliable evidence that any intravenous therapy (iodides, mercurochrome and other dyes) has altered the course of the disease in any way.

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- 6 Chatham Square.

Hospitals Owned by Physicians (A Solution of Many Economic Problems)

By A. H. Hallmann, M.D., Chicago, Illinois

RECENTLY, through the medium of the *Bulletin of the Northwest Branch, Chicago Medical Society*, I quoted excerpts from a booklet presenting a plan to link up hospitals under the banner of the medical profession, written by Dr. Harry L. O'Connor, of Chicago. The plan he presented has awakened in me, as it has done, no doubt, in others, an interest in the ownership and management of hospitals.

We practitioners do not own, control or have a voice in the management of the hospitals in which we work daily. In fact, most of our hospitals are under the control of laymen. If a court room, analytical laboratory or mechanical shop, is, respectively, best presided over by a judge, a chemist or a mechanic, a hospital, which is a medical affair, should be best managed by medical men, if we are to preserve our own interests, and the interests of our patients. It stands to reason that the problems of our hospitals will be better served under the government of large medical

boards. Physicians alone understand the needs of their colleagues and of their patients and should be at the head of hospital organizations, if both are to be served well.

Dr. O'Connor says: "To take care of the sick properly, all physicians and patients must be given impartial service and attention—there should be no class distinction. Medical men must begin to realize that, and put it into force through the control of hospitals."

The closed-staff and privately-owned hospitals, in any community not having an open-staff institution, are not of especial general advantage, since the privileges of such hospitals are for a few, and the physicians of the community who hospitalize their patients, often find themselves embarrassed. These institutions are often characterized by selfish rule and autocracy and may actually impede the progress of medicine, as they deprive many medical men of the opportunities which hospital service offers.

Apart from placing the control of a group of hospitals in the hands of the medical profession, the plan has much to offer in the reduction of hospital cost to patients. The problem, which is well known, occupies the minds of many persons and has been the cause of much investigation, with the general conclusion that the advancement of medicine is retarded because of the large expense of caring for the sick.

It is also well known that endowment funds, which help to pay the difference between the actual cost of treatment and what the patient can pay, are not the solution of the problem. The solution seems to lie in reducing the cost of hospital operation, so that hospital fees can be lowered and still show a profit for the institution, instead of a deficit.

The sponsor of the plan says that there are many factors to consider before the idea of a holding corporation for a group of hospitals can be put into force. In the first place the conception is new and contrary to the usual methods of hospital procedure. The present individual and competitive attitude of the private hospitals must be removed. Cooperation and harmony are necessary in the modern trend of business today. Combined power and cooperation can result in only prosperity and good will toward all. There is no reason why hospitals should not be operated according to the same policies now followed by other businesses. If business policies were used, it would not be necessary for the physician or hospital to carry the burden of charity, which is a responsibility belonging to every member of the community.

Physicians and hospitals have given freely of their services to charity in the past, but it is no more their problem than it is that of the grocer or coal dealer, who are no different from us who run hospitals or professional offices. Therefore, it is no credit to our communities to allow people to go through life as charity patients, when they can well afford to pay for their services, if the cost is brought down to where they can afford it. Charitable organizations can better serve their purposes by paying hospital and doctors' bills for those who, after proper certification, are declared unable to pay.

According to Dr. O'Connor's plan, physicians will benefit through the opportunity to participate in the profits of the hospitals,

through their better-paid medical service; through proper credit ratings of patients; through the plans to reeducate patients who are now going to dispensaries and who can pay, if the price is right; and through the rotation of emergency calls and other privileges, all of which mean profit, if properly conducted.

There are other features about this plan that are very interesting, and are discussed by Dr. O'Connor as follows:

"The problem of financing a hospital that belongs to a group, would be simply a matter of re-distribution of the capital of the holding corporation. While all hospitals of the group must show a profit, occasionally it will be necessary to extend aid to one of them during the slack months. The interest rate in such cases would be low.

"A great saving can be effected in the buying of hospital supplies in large quantities and at the source of production.

"One of the expensive items, in connection with the small hospital, is the technical personnel. In group control and management, each small unit hospital would not be required to employ a high-salaried superintendent, roentgenologist, pathologist, pharmacist, physiotherapist, dietitian and accountant. There need be but one of each, to direct and supervise the activities of the various departments.

"An economy can also be effected by loaning expensive but infrequently used instruments and apparatus, to each other. In the conduct of the training school a system can be developed, where the work may be done at a central place.

"A central clinical laboratory for difficult diagnostic procedures would help cut the cost of hospital care. A central credit and collecting bureau can be developed, and all this would result in a great economy. A central statistical department would help to save much lost motion, control waste of supplies and, in time, all will effect economies to reduce operating costs and produce service at a reasonable cost.

"The holding corporation for a chain of hospitals will use every known means to increase the income in an ethical manner, and every effort will be made to eliminate charity, endowments, gifts and revenues that cannot be earned through legitimate service."

In conclusion, it is well to remember that the medical profession, in order to gain the highest professional and economic standing in the various communities where medical service is now abused, must first gain control of the hospitals, clinics, dispensaries and all other work-shops that are devoted to the practice of medicine.

I feel, as does Dr. O'Connor, that, if these various institutions are controlled by the medical profession, many of our present economic problems will be solved.

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PHYSICAL · THERAPY AND RADIOLOGY

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SEEING TOO MUCH IN A ROENTGENOGRAM

WHEN a physician purchases x-ray equipment, he should, at least, fit himself to carry on that branch of diagnosis at least intelligently, and not take for granted abnormalities which he *imagines* he sees on a film. One would think that, after all the years which have been spent in the study of x-ray films and their proper production, it would be a matter of common knowledge that a single flat film of any part of the body is simply a record of different densities, in which all the shadows, in their different planes, are superimposed.

It is astounding how many medical men, either through ignorance, carelessness or both, or in the chase of the almighty dollar, will take even an unsatisfactorily made x-ray film and advise the patient to have some serious operation on absurdly insufficient evidence.

This week a patient was referred by a well known surgeon, with a diagnosis of kidney stone and gall-stones, made by a general practitioner who had installed x-ray apparatus and who, evidently, had had no instruction except that given him by the salesman. He had with him two films, made at different hours, both of which showed a dense, annular shadow

in the region of the kidney pelvis on the left side and a fairly well filled gall-bladder on the other. Neither film was particularly good. However, in this instance, the quality of the film made little difference, as the point in question has to do with shadows cast by organs lying in different planes.

When this man was turned on his side and a lateral film made, the shadow supposed to be in the kidney was found to be lying about midway between the spine and the anterior abdominal wall, and the proper administration of the dye for the Graham test showed a perfectly normal gall-bladder, which emptied immediately, following the ingestion of the fat meal. Investigation of the colon, following a barium meal, showed a short, thick, kinked appendix, with the lumen almost one-fourth inch in diameter. There was absolutely no physical evidence of either gall-bladder or kidney involvement; yet despite this fact, immediate operation was advised.

This sort of thing is not particularly uncommon and it seems advisable to sound a word of warning against jumping to conclusions as to what one *thinks* one sees on a roentgenogram.

W. H. G.

What the General Practitioner Should Know About X-Rays

By C. S. Bucher, M.D., Champaign, Ill.

THERE is probably no branch in Medicine that has made as rapid progress in the past few years as have the x-rays, more properly termed roentgenology, after its discoverer, Roentgen. This advancement has been made possible by cooperation and combined effort on the part of physicist, chemist, biologist, roentgenologist, surgeon and pathologist.

The allied sciences have given us instruments of precision with which we are able to measure accurately the wave length and dosage, superficial and deep. The international unit, named after Roentgen, signified as the "r" unit, has converted x-ray therapy from empiricism and guess work to an accurate science.

In this paper I shall use the terms "roentgen rays" and "x-rays" interchangeably, both meaning the same. Roentgen rays is, however, the accepted term.

PHYSICAL PROPERTIES

Roentgen rays or x-rays are light, with the same characteristics as visible light, the principal difference being that roentgen rays are composed of much shorter wave lengths, therefore have a much greater penetrating power than visible light. Visible light possesses very little or no penetrating power to solid matter; the shorter the wave length the greater the penetrating power.

Since Roentgen's discovery, in 1895, of a beam of rays of short wave length which he called x-rays, later named after the discoverer, Roentgen rays, these rays have been of great service in medical, scientific and commercial fields.

The physical properties of roentgen rays are the same as those of visible light. They can be reflected, refracted, diffracted and polarized. They have the same effect on chemical substances as have ultraviolet rays. The effect on biologic substances varies with the wave lengths.

The wave lengths of x-rays are imperceptible by our senses. If the voltage is considered as the force or push power behind the electron which is shot from the cathode of the x-ray tube to the anode or target, the velocity of which governs the

wave length, it is at once apparent that, the higher the voltage the shorter the wave length. In deep therapy, high voltages are used, with the interposition of filters. When x-rays strike the filter, the shorter wave lengths pass through the filter and penetrate deeply into the tissues so treated, while the long wave lengths are stopped by the filter.

When a beam of roentgen rays passes through solid matter, interposed between the target of the x-ray tube and a photographic film or a fluoroscopic screen, a shadowgraph is the result.

When an x-ray film is developed, it will be seen that dense structures such as bone, calcified areas, etc., produce a light or gray-colored shadow on the film. This is due to the greater absorbing power of dense structures to roentgen rays, as compared with structures not so dense, as the lungs, which produce a darker shadow, while the edges of the film or areas without the interposition of structures between the target of the x-ray tube and the film will be darkest. This phenomenon is reversed when a picture is printed on photographer's print paper. This variation in densities of structures penetrated by the roentgen rays likewise produces shadows on the fluoroscopic screen, with the difference that the dense structures, absorbing the greater amount of rays, produce the darker shadows. This variation of shadows, aided by opaque chemicals, catheters, instruments and foreign bodies, is the basis of diagnosis of x-ray films and x-ray fluoroscopy.

We have in the x-rays, when properly used, an instrument of inestimable value. By these methods the radiologist is able to locate definitely foreign bodies that absorb x-rays, differentiate normal from abnormal organs by size, shape, position, motility and structural changes and give the exact location and position of fractured bones. In this last, the value of x-rays is at once apparent and well known. No doctor can successfully treat fractures and prevent, or successfully defend, a malpractice suit without access to an x-ray machine.

STUDYING BODY CAVITIES AND STRUCTURES

Since the discovery, by Graham and Cole, of the use of tetraiodophenolphthalein for the visualization of the gall-bladder, we claim 98 percent diagnosis in gall-bladder affections by x-rays alone, as compared with 2 percent before that time.

Constrictions of the esophagus, of spastic or organic origin, and diverticuli are visualized; also the position, motility, shape, size, deformities, niches, peristaltic waves, emptying time, etc., of the stomach and duodenum, which are all of diagnostic value. The *barium enema* is used for fluoroscopic study and diagnosis of the rectum and colon.

Study of the genitourinary tract for calculi, hydronephroses, pyelitis, strictures, cystitis, cancer, tumors, diverticulitis, foreign bodies, etc., is now expected in suspicious cases. The removal of a kidney, without first catheterizing the other ureter and making a roentgenogram with the catheter in position, might prove disastrous to the patient and physician.

Fluoroscopic and radiographic study of the heart and lungs is, without doubt, saving the lives of thousands of individuals yearly, by early diagnosis and the subsequent institution of early treatment. The *thymus gland* may be mentioned, in this connection, as being of more than minor importance.

The abnormal densities of the sinuses of the head, including the mastoid cells, are evidences of disease processes, usually with pus formation, in a fair percentage of cases requiring surgical intervention.

The entire skeleton may and, in some cases, should be roentgenographed and studied. The principal things looked for here, beside fractures, are rickets, deformities, bone tumors (malignant and benign), exostoses, spurs, tuberculosis, osteomyelitis, periostitis and cysts. Many of these conditions can be diagnosed only by x-rays or a biopsy. If one uses the x-rays, he has not increased the hazards for the patient's life, even if a few days are spent in study and consultation of the films. The one exception is, of course, acute osteomyelitis, where an early operation is imperative. Do not wait, here, for x-ray findings. In malignant disease, if a biopsy is done, the patient and surgeon should be in a position and condition to undertake a major operation at once, if necessary.

Roentgen-ray therapy is a large subject in itself, of a very technical nature. The physics, mathematics and biologic effects are not within the scope of this paper. I shall confine my remarks to the discussion of some of the most common diseases in which x-rays have proved to be of value.

DISEASES OF THE SKIN

Dr. McKee, in his book on x-rays and radium in the treatment of the skin, lists ninety diseases in which x-rays and radium have been found useful. Adding to this large number of diseases of the skin, the diseases affecting the remainder of the human body, with the constant advance in technic, with an international unit and with instruments of precision for the measurement of wave lengths and "r" units, it is at once obvious that the number of conditions affecting the human tissues which yield, entirely or in part, to roentgen-ray treatment is far beyond the hundred mark.

McKee arranged the list of diseases in which x-rays or radium rays are of benefit in groups, as follows:

Group 1.—This group comprises diseases which very often cannot be permanently cured without the use of x-rays or radium:

- Bromidrosis (localized)
- Chromidrosis
- Dermatitis papillaris capillitii
- Favus of the scalp
- Hyperidrosis (localized)
- Keloid
- Rhinoscleroma
- Tinea tonsurans

Group 2.—In this group are placed diseases in which irradiation is usually the most useful, if not the only useful, treatment:

- Hodgkin's disease of the skin
- Leukemia cutis
- Localized pruritus
- Lymphogranulomatosis cutis
- Mycosis fungoides
- Sarcoma (giant cell)
- Sarcoma (Kaposi)

Group 3.—Rare affections in which irradiation is reported to have given excellent result in a few instances. If further observation supports these reports, these diseases may be transferred to Group 1 or 2.

- Acanthosis nigricans
- Addison's disease
- Granulosis rubra nasi
- Keratosis follicularis

Kraurosis vulvae

Parapsoriasis (lichenoid type)

Group 4.—Roentgenotherapy gives such excellent results in the diseases of this group that it is usually the method of election. However, there are other successful therapeutic methods and irradiation sometimes fails. Selection is necessary:

Actinomycosis

Angioma (cavernous)

Angioma (senile)

Blastomycosis

Carbunculus

Granuloma annulare

Lupoid syphilis

Lupus miliaris disseminatus

Scrofuloderma

Sycosis vulgaris

Tinea barbae

Verruca plantaris

Group 5.—Diseases which may be cured or benefited by irradiation alone, or by various surgical and medical methods. Selection of cases is necessary and very often combined treatment is used.

Epithelioma (basal-cell)

Erythema induratum

Keratosis

Lupus vulgaris

Paget's disease

Sarcoid

Tuberculosis orificialis

Tuberculosis verrucosa cutis

Group 6.—In this group the affections can be cured or benefited by orthodox dermatologic treatment, or by irradiation alone. Selection is often advisable, as also is combined therapy.

Acne varioliformis

Acne vulgaris

Cheilitis exfoliativa

Cheilitis glandularis

Cornu

Verruca vulgaris

Group 7.—Conditions in which x-ray therapy is very uncertain (as are all methods of treatment) but produces prompt and permanent cures in some cases.

Onychomycosis

Paronychia (chronic)

Group 8.—Affections in which roentgen-rays are often useful after other remedies have failed.

Furunculosis

Pityriasis rosea

Rosacea

Sporotrichosis

Group 9.—Diseases that may be cured

or benefited with x-rays or radium, but more certain and better results are often obtained with other methods of treatment. Irradiation is indicated in selected cases, alone or in combination.

Callositas

Epithelioma (prickle-cell)

Hypertrichosis

Nevus pilosus

Rhinophyma

Sarcoma (general type)

Group 10.—In these diseases roentgen therapy is often of great value for the relief of annoying subjective and objective symptoms, but such treatment should be subordinate to intelligent dermatologic management.

Dermatitis exfoliativa

Dermatitis venenata

Eczema

Eczematized ringworm (dermatophytosis)

Infectious eczematoid dermatitis

Intertrigo

Lichen planus

Neurodermatitis

Pompholyx

Psoriasis

Group 11.—Roentgen therapy may be of some temporary value in the diseases of this group.

Lupus erythematosus

Prurigo

Tuberculide

Group 12.—Roentgen-rays and radium have been successfully employed in diseases of this group, but experience has not been sufficient for a true estimation of the value of such treatment.

Epithelioma (multiple benign)

Folliculitis decalvans

Granuloma pyogenicum

Lichen nitidus

Lichen scrofulosorum

Lymphangitis (chronic, of skin)

Molluscum contagiosum

Pernio

Sporotrichosis

Syringoma

Group 13.—This group consists of diseases in which beta rays of radium are more efficacious than are gamma rays or x-rays.

Angioma (superficial cavernous)

Angioma (strawberry mark)

Cornu (soft)

Keratosis (small)

Kraurosis vulvae

Leukoplakia

Lupus erythematosus discoidius
Lymphangioma circumscriptum

We have obtained some very striking results in some of these diseases. In the acute infections, as furunculosis of the nose and upper lip, with redness, swelling and severe pain transmitted deep into the orbit, accompanied with early systemic symptoms, treated with short wave lengths (0.16), the dose ranging from 50 to 200 "r" units, one such treatment, when given early, is usually sufficient to effect a cure. The pain is relieved in from thirty minutes to six hours, swelling subsides and the whole process returns to normal.

Epithelioma yields to radiation, when properly applied early in the disease.

OTHER USES

In gynecology, metrorrhagia, menorrhagia, fibroids of the uterus, stormy climacteric, and carcinoma are benefited or cured by x-rays or radium or both, in selected cases, associated with surgery.

In carcinoma of the rectum or any other part of the body, the patient receives benefit, when the rays are properly applied. In the later stages of the disease, the doomed sufferer will usually receive relief from pain and pass on without the prolonged use

of morphine. Most gratifying results are to be obtained in the little sufferer from whooping-cough. The paroxysms may be reduced from fifteen a night to one or two or even none.

We might continue indefinitely if space would permit. This paper is primarily to acquaint the general practitioner with some of the advantages of x-rays, leaving the diagnosis, technic and management to the roentgenologist.

To Professor G. L. Clark, of the University of Illinois, we are indebted for a new and highly scientific method of fine structure analysis, known as the diffraction method. By this method structures more than five hundred times smaller than can be seen by the microscope are being photographed by means of x-rays. The arrangement of the molecules in substances in commercial and biologic fields is being studied by the only instrument capable of permitting this fine work—the x-rays.

Normal and pathologic tissues produce different shadowgraphs, as do muscles, tendons, etc., at rest or when stretched. A muscle, when stretched, crystallizes, producing a characteristic shadowgraph. On the photographic film the possibilities in this field are beyond our present conception.

CLINICAL MISCELLANY

Pain Following Electrocoagulation

THERE is very little likelihood that any operative technic is absolutely painless, yet the vast number of operative procedures undertaken by electrocoagulation, and their reported painless after-care and healing, prompts one to an analysis of such cases as are reported to be painful.

In surgery done under local anesthesia, "after pain" most often results from traumatism or infection. Traumatism should play no part in any operation performed by electrocoagulation, except as occasioned by the introduction of the anesthetic. The area operated upon becomes entirely sequestered or separated, through destruction of the blood and nerve supply, from the surrounding tissue. The procedure of coagula-

tion obliterates these channels of communication to the area in a manner proved less painful than any other, even long before the use and knowledge of anesthesia and antisepsis. Reference is made to the searing irons used in olden days after amputations, and the fact that the uninfected stump healed painlessly.

Infection is the first consideration of the cause of pain following electrocoagulation. This infection may have been introduced by the local anesthetic, or the injection may have been made into an already infected area which was not properly or sufficiently coagulated to have been destroyed. A complete and sufficient coagulation area

includes the destruction of the entire infected area.

After-pain is often the result of the use of too large a quantity of anesthetic solution. The injection of large amounts of anesthetic into the deeper structures, where it may be forced between heavy fascia layers, where absorption is slow, by means of its very presence causes pain. It is obvious that the use of a minimum amount of anesthetic and its injection superficially, are means of controlling this type of after-pain. We now come to the consideration of another factor, wholly peculiar to the coagulation.

Electrocoagulation, or the removal of tumors by means of the present-day high-frequency electric current generator, is done by means of the mono-polar Oudin current, as fulguration, or the bi-polar d'Arsonval or diathermy current, by coagulation. It has been my observation that, by fulguration, and often without any anesthesia, a less painful healing results; whereas, after bi-polar coagulation, even carefully done, a variable period of after-pain may often be noted. A study was therefore made and has resulted in an entirely new conception of the principle of pain incidence and the adoption of a newer procedure to overcome it.

Fulguration has been long known as a process which dehydrates the surrounding area, while coagulation does not. When a fluid anesthetic is injected about an area to be "burned off" by fulguration, the operation is not completed until dehydration is effected. In this procedure much of the fluid in the area is attracted to the operative field and destroyed. This is not true of bi-polar coagulation. With a large indifferent electrode at a distance and a smaller operating electrode, the lines of current flow and heat production proceed first in the general direction of the larger electrode, and then by paths of least resistance.

Where much fluid has been injected into the surrounding tissues, wherever the fluid lanes lie there is a current path of least resistance. The flow of the current causes the confined fluid to reach a high temperature sooner than coagulation is completed at the site of operation. The patient is, therefore, left with an area about the coagulation field, in which fluid of a temperature sufficient to cause tissue destruction has been allowed to remain. As soon as

the effect of the anesthetic used is worn off, the patient suffers from the effect of the tissue destruction due to the superheated fluids. This is also true of any area which is vascular or has a relatively high fluid content, and pain follows coagulation in such areas, even when done under general anesthesia.

To overcome the pain, many operative technics have been advised and tried, but I doubt that any of them have contemplated the exact cause to be remedied. However, based on this study, I have been able to construct some devices which have proved effectual, and which I hope to describe in a later paper.

The newer technic is built on the principle of the close application of the two electrodes, keeping both approximated to the operative field. Let it suffice to say that the operative procedure of electrocoagulation and the healing of the lesion should and can be painless.

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Making Roentgenography Easier

THE most important step in the routine of roentgenography is the chemical processing of the negative after the exposure.

A room should be set aside for photographic purposes exclusively. It should be clean, dust-free and light-proof, with running water and enough storage room to accommodate photographic necessities.

Distilled water should be used for both developer and fixer. The temperature for development is 65°F. and no other. A time clock is essential. Films should be rinsed before being placed in the fixer. Fixing, at 65° should be continued for at least 13 minutes. Water for rinsing should be free from all dirt and oil.—E. L. JONES, D.D.S., Albany, N. Y., in *J. Am. Dent. Assn.*, Apr., 1931.

Ultraviolet and Viosterol

THERE is the ultraviolet ray enthusiast, who claims that half the illness of infancy is due to lack of sunlight, when we know that the principal use of ultraviolet rays is the synthesis of vitamin D in the sterols of the skin of a child deficient in such vitamin. When this is the only aim for which such rays are administered, how much better and also cheaper is a little

ingested codliver oil, containing, as it does, that very important vitamin A in addition to the powerful content of vitamin D. As to the alleged effects of ultraviolet rays, or indeed any light, on the blood or on healing processes, these are still *sub judice*.—E. A. BARTON, M.R.C.S., L.R.C.P., in *The Practitioner* (London), March, 1931.

If you want to see the first issue of the new **JOURNAL OF VITAMINS AND ACCESSORY FOOD FACTORS**, which is to appear in the summer, send your name and address to the Business Manager, CLIN. MED. AND SURG., and say "Send the JOURNAL OF VITAMINS."

Delayed Healing of Wounds

Wounds which will not heal, due to the formation of granulation tissue, fall into two great classes; the overgrown granulations and the deficiently growing granulations. In the first group, a cutting down of the overgrowth or removal of the cause of this overgrowth (use of caustics, better approximation of wound edges, removal of foreign body, etc.) is indicated. In the second group, the granulations may be stimulated and encouraged by the application of heat, light or ultraviolet rays. The "Ace" bandage is very efficient in dealing with certain ulcerous wounds of the lower extremities that will not heal.—DR. N. W. CORNELL, New York, in *Am. J. Surg.*, Feb., 1930.

RECENT ABSTRACTS

Wireless Diathermy

In *Brit. J. Actinother. and Physiother.*, Jan., 1931, Dr. W. J. Turrell, of Oxford, Eng., draws attention to the method of applying indirect surgical diathermy (wireless diathermy), which appears to have originated with Bordier, in France. This method is suitable only for the treatment of small growths, warts, facial blemishes, etc.; it is not suitable for the treatment of large growths.

The patient lies on a condenser couch connected with the diathermy machine. The current is distributed over the greater part of the patient's body and from most parts of it a current of sufficient strength can be drawn off (without the encumbrance of wires) for the destruction of small growths.

Technic: The technic of indirect surgical diathermy is very simple. If hand electrodes are employed, the patient lies on a condenser couch, connected with one terminal of the diathermy apparatus, holding an electrode, connected with the other terminal of the apparatus, in each hand. The strength of the current is adjusted until 200 to 500 m.a. (according to the size of the growth to be removed) are registered by the amperemeter. The operator, holding a suitable pointed metal electrode in his bare hand, applies its point to the growth or nodule to be destroyed. The operator must not touch the patient when the current is connected; but he may steady his hand by interposing a thick cushion between his arm and the patient, and he will find that it is very helpful to do so in very delicate work, such as tracing out venules on the face.

When treating warts or corns, in a few seconds after the instrument has been applied, the base of the corn or wart is seen to light up like a minute lamp, the result of the condenser

action. When this light is well established, the treatment of the part is completed, and as the result of its coagulation the wart will be seen to assume a yellow colour. There is no after-pain; no dressing is needed, as the coagulated tissue forms a protective covering until it is cast off in ten days to three weeks, when the underlying tissues are healed. Corns, which have resisted and recurred after the usual cutting procedures, can be very satisfactorily treated by this method.

Cholecystography

Based upon a total of more than 3,000 cholecystographic examinations, of which, 1,956 were by the intravenous method (phenoltetraiodophthalein was used in all), Dr. Sherwood Moore, of St. Louis, in *J.A.M.A.*, Dec. 27, 1930, expresses the opinion that intravenous injections in cholecystography furnish the most accurate method now in use to determine the condition of the gall-bladder.

Oral application of the test is valuable to prove the organ normal and to determine the existence of cholesterol stones and deformities of the gall-bladder. Non-visualization and faint visualization of the organ, with the oral method, should be confirmed by an intravenous test.

With the intravenous method, the pathologic examination of excised gall-bladders shows a high degree of accuracy for the preoperative diagnosis. Errors in preoperative diagnosis are found chiefly in the cases of pericholecystitis.

In view of the fact that only 58 of 220 cases of stones were demonstrated preoperatively, the percentage is so low that the discovery of stones cannot be thought to be a valuable property of cholecystography. Therefore, a radiographic examination of the gall-bladder region should precede cholecystography. Normal cholecystographic

behavior can occur with both calcified stones and cholesterol stones, but this behavior is exceptional. It can also occur with extensive pericholecystitis. Such observations are not sufficiently frequent, however, to constitute an indictment of the usefulness of cholecystography in the diagnosis of cholecystitis and its associated pathologic conditions.

Electrochemical Therapy for Exogenous Alopecia

In *M. J. & Record*, Jan. 21, 1931, Dr. Rose Alexander, of Los Angeles, Calif., recommends electrochemical application of oxygen therapy in the treatment of exogenous alopecia due, presumably, to infection of the scalp by external microbes.

In the author's technic, the patient is told to relax; the denuded area to be treated is cleansed with alcohol and a small towel is firmly secured about the head above the eyebrows. A carbon electrode wrapped lightly but well covered with absorbent cotton, is immersed in saline solution, attached to the positive pole of a galvanic battery and given to the patient to hold; the negative electrode is similarly wrapped and dampened with a fifty-percent solution of distilled water and H_2O_2 (hydrogen peroxide), which has been slightly alkalinized to litmus paper with acid sodium carbonate (which releases a greater amount of oxygen).

The scalp is sparingly covered, in the denuded area, with a cotton swab applicator on which has been dropped equal parts of iodine and alcohol with Lugol's solution. With firm, gentle and swift strokes of the negative electrode, carrying less than 10 ma. of current to the posterior scalp and less than 5 ma. to the frontal scalp, treatment is given until there is complete discoloration; there being liberated a small amount of nascent oxygen with free iodine. At the close of each treatment, rinse the part treated in running, warm water, followed by gentle drying.

Depending upon idiosyncrasies, the maximum treatments are three a week, allowing a day between applications, the first and third one being without the iodine; treatment with the dioxide is prolonged until there is a slight erythema of the skin. In less than three months, in suitable subjects, hair will be seen to grow at the margins of the existing growth.

Syringomyelia Treated by Roentgen Therapy

Syringomyelia has been treated by the x-rays since 1905. In *Am. J. Surg.*, Aug., 1930, Drs. L. Delherm and M. Morel-Kahn, of Paris, France, report on 22 personal cases so treated and others collected from the literature, amounting in all to a total of 159 cases. Of these, 124 (79 percent) have been improved to such an extent that, in a small number, it is justifiable to use the word cured. Thirty-three (33) cases have remained stationary or have become aggravated.

The authors conclude that, in the presence of an affection like syringomyelia, where the

evolution of the malady is particularly severe, the use of roentgen therapy permits the hope that, in an appreciable number of cases, a considerable improvement may be expected in the prognosis, but on condition that the x-rays shall be applied early in young subjects and keeping up the treatment for a long time.

The authors use the following technic systematically: Spark-gap, 25 cm.; intensity, 2 m.a.; filtration 5 mm. aluminum; focal skin distance 30 cm.; elongated fields on each side of the spine centering on the medullary canal.

After Effects of Artificially Produced Menopause

In *Brit. M. J.*, Nov. 15, 1930, Dr. M. L. Kreitmayer, of St. Bartholomew's Hospital, London, Eng., from experience gained in the production of artificial menopause by radium in 122 cases (of which 97 were traced) finds that 77 of the 97 complained of flushes, 52 of sweats, 59 of depression, 54 of headaches and 54 of "nerves." The majority of these patients were near the menopausal age at the time of treatment.

The usual menopausal symptoms are, therefore, prominent sequelae of the treatment. In spite of these sequels, however, 76 of the women said that they were better, 10 that they felt just the same and only 3 that they were worse. Although a large proportion complained of pain, one cannot say how much of this was due to the treatment or even if the pain was present or not before the treatment.

The dosage usually given was 50 mg. element, screened by a minimum of 0.5 mm. thickness of platinum and kept in position for 72 hours.

Roentgenologic Aid in the Diagnosis of Ileus

In *Bull. Battle Creek Sanit. & Hosp. Clinic*, July, 1930, Dr. J. T. Case emphasizes the importance, in diagnosis of ileus, of the roentgenologic sign to which he first called attention in 1914.

The roentgen study of the patient is made at the bedside and disturbs him but very little. An opaque mixture (barium-water-lactose) may or may not be used.

A diagnosis of acute obstruction is based on the finding of dilated coils of small intestine (herring-bone aspect: ladder arrangement), visualized by gas, or gas and fluid, accumulations.

The method is valuable in both acute and chronic ileus. In the latter, the patient is better examined in the erect position; the diagnosis is based on broad (not high) gas pockets over fluid levels in abnormal situations. In acute cases, the erect position is usually not feasible, and studies are made in lateral or supine positions, where the diagnosis depends on recognition of Kerkring's folds in dilated, parallel loops of intestine.

The method is of special value immediately after operation in abdominal cases.

The chief value lies in the ability to determine by roentgen rays the existence of dilated loops of bowel; to differentiate gas in the small bowel

from colonic gas; to estimate the actual caliber of the intestinal loops thus visualized; to estimate the approximate site of the obstruction; but mainly to confirm the fact of ileus before proceeding to the emergency operation. In the absence of dilated intestinal loops, one doubts the fact of ileus.

The method does not attempt to discount any of the usual clinical signs of acute obstruction of the intestine.

Lymphoid Tissue Recurring After Tonsillectomy

In *Arch. Phys. Therap., X-Ray, Radium*, Nov., 1930, Dr. A. R. Hollender, of Chicago, points out that, in spite of the skill of the surgeon in his use of instruments and technic, recurrences of lymphoid tissue follow tonsillectomy.

Surgical diathermy, either as electro-desiccation or as electro-coagulation, is a desirable and satisfactory procedure for the destruction and ultimate disappearance of recurring lymphoid tissue. Care must be exercised in the selection of cases and the correctness of technic, for upon these factors successful results depend.

Roentgen-Ray Diagnosis of Pulmonary Tuberculosis in Infants and Children

Very frequently pulmonary tuberculosis in infancy and children spreads from an infected intrathoracic lymph node. In *California & West. Med.*, Aug., 1930, Dr. R. G. Karshner states that, in the diagnosis of tuberculosis of the intrathoracic lymph nodes, the roentgenogram is indispensable. The diseased lymph nodes, in all their variety of size, shape and position, are projected as dense shadows, extending beyond the mediastinum into the pulmonary field.

In infants, tuberculous adenopathy is unique; the enlargement is relatively greater than in children; and the glandular shadow often assumes the dimensions of a neoplasm.

In children the problem of roentgen-ray diagnosis from intrathoracic adenopathy becomes more difficult. The roentgenogram is valuable, however, in showing whether the infection is confined to the bronchial nodes, thereby differentiating a benign condition from a graver one of actual pulmonary disease.

Use and Abuse of Phototherapy

As enunciated by Dr. F. T. Woodbury, of New York, in *New York St. J. Med.*, Apr. 15, 1931, in phototherapy, as in other forms of ray therapy, the remedy does not lie in the lamp used nor in the radiation; the real remedy is the energy produced within the cells when they absorb radiant energy. When this energy is absorbed by living cells it is converted into heat, or chemical energy or both. All phototherapeutic treatments fall of necessity into one of these three classes.

Living cells are selective in choosing which wave lengths of energy they will absorb, and

absorption spectra give the key to therapeutics by radiant energy. The absorption is independent of the type of lamp or other source of energy.

The object of phototherapy, is, generally, to administer the maximum photochemical energy without producing a dermatitis and, in conjunction with caloric rays, by a spectrum resembling as nearly as possible that of the zenith summer sun. As a therapeutic index the term "erythema dose" has, therefore, no meaning.

By photothermal energy or phototherapy the author indicates the second effect of absorption of radiant energy expressed as heat. The clinical reaction to phototherapy is an active hyperemia. As such it is the extinguisher of the inflammatory reactions caused by photochemistry and is, therefore, both a preventative and an antidote. It also brings about marked systemic reactions, depending upon the increased temperature, and it has distinct indications and contraindications which make it a remedy to be used only under the direction of a physician.

The sources of radiant energy producing both photothermal and photochemical effects are heated bodies. At a low degree of heat the energy emitted is in the longest infrared region. As the temperature rises, the wavelengths of energy emitted become shorter and shorter. At about 500°C. they cause visual perception of what is sensed as red light. At about 1400°C. the invisible ultraviolet wavelengths are added. The higher the temperature of the generator, the greater will be the total quantity of energy absorbable as heat and the more nearly will the spectrum resemble in extent that of the sun.

Radium Treatment of Buccal Carcinoma

Based on several years treatment of buccal carcinoma by radium (Regaud technic), Dr. G. E. Birkett, of Manchester, Eng., says in *Canad. M.A.J.*, Dec., 1930.

"Although the number of cases treated by radium is relatively small, the three and five year results are about the same as those obtained by surgery. But the likeness ends there, for the results by radium have been achieved, not only in operable, but also in inoperable cases, and with no mutilation to the patient and no impairment of function."

X-Ray Stimulation of the Internal Secretions

In *Endocrinology*, Nov.-Dec., 1930, Dr. M. B. Gordon, of Brooklyn, gives a comprehensive review of the literature on the stimulative effects of x-rays on endocrine glands. The biologic basis for the stimulative action is found in Arndt Schulz' law: "Weak stimuli accelerate vital processes; moderate promote them; strong inhibit them; and the strongest stimuli destroy them."

The widest application of small-dosage irradiation has been in the field of gynecology. There is enough clinical evidence showing favorable results from weak irradiation of the ovary to justify its use in carefully selected cases. Successful outcome has been reported by many, in more than 50 percent of their cases of amenor-

rhea. The results in the treatment of dysmenorrhea and oligomenorrhea have been fair.

Untoward symptoms of both physiologic and artificial climacteric periods have been treated by irradiation of the pituitary, thyroid and ovaries, with amelioration in most instances.

Startling results have been reported in the treatment of childhood endocrinopathies and related conditions, including mongolian idiocy, by irradiation of the pituitary, thyroid and gonads.

Improvements have been reported by several in the irradiation of the thymus in certain skin diseases.

While much has been written regarding the effects of the irradiation of other glands in different pathologic states, opinions and results are too varied to draw any definite conclusions of clinical value.

Ultraviolet Ray Burns

To avoid ultraviolet ray burns, Dr. A. P. Evans, in *Arch. Phys. Therapy., X-Ray, Radium*, July, 1930, reports that he uses the following method of treatment:

The apparatus consists of a high-frequency generator with a spark gap control, the whole resembling the early wireless spark transmitter of one k.w. capacity. The frequency has been raised extremely high and the faradic wave preserved and accentuated. The patient is connected to the resonator circuit and the operator applies a hard-vacuum electrode which is grounded through his own body to the surfaces to be treated.

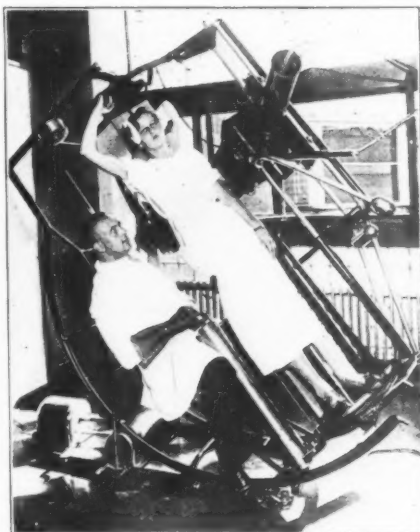
The faradic wave plays an important role in reducing edema by contracting the muscle fibers in the skin and blood vessels, thus preventing blood stagnation and edema. Without blood stagnation and edema, there can be no blister formation or pain due to pressure on nerve ends. Each application is so brief that no sensation of burning is experienced. Great care must be taken that no arcing takes place between the skin and electrode.

of diagnosis. It does not deal with the technicalities of radiology, the author's object being to correlate pathologic and radiologic appearances in such a way as to simplify the interpretation of radiographs for those not practicing radiology.

There are 11 chapters, the first ten dealing with radiography of special regions and discussing the evaluation of x-ray plates in pathologic conditions. The last chapter deals with therapy.

The book might well be used as a consultative one by general practitioners.

NEWS NOTES



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BOOKS

Kerley: Advances in Radiology

RECENT ADVANCES IN RADIOLOGY. By Peter Kerley, M.B., B.Ch. (N.U.I.), D.M.R.E. (Camb.), Assistant Radiologist, Westminster Hospital; Radiologist, the Royal Hospital for Diseases of the Chest. With 120 Illustrations. Philadelphia: P. Blakiston's Son & Co., Inc., 1012 Walnut Street. 1931. Price \$3.50.

The book deals especially with the advances in the applications of the x-rays in the field

A Modern Fluoroscope

It is claimed that the Roentgen Institute, of Frankfurt, Germany, built and equipped in accordance with the plans of Prof. Dr. Holfelder, is the most modern institution of its kind in the world. The picture shows a fluoroscope which is said to obviate danger to the man who is using it.

SPEED AND SENILITY

Accidental deaths from automobiles and airplanes are not the only deleterious effects of the speed age. It accelerates, as well, the normal aging process.—DR. HENRY W. COOK, in *Nation's Business*, June, 1930.

THE • SEMINAR

CONDUCTED BY

MAX THOREK, M.D. (Surgery)

GEORGE B. LAKE, M.D. (Medicine, Ethics and Economics)

[NOTE: Our readers are cordially invited to submit fully worked up problems to the *Seminar* and to take part in the discussion of any or all problems submitted.

Discussions should reach this office not later than the 1st of the month following the appearance of the problem.

Address all communications intended for this department to *The Seminar*, care CLINICAL MEDICINE AND SURGERY, North Chicago, Ill.]

PROBLEM NO. 6 (OBSTETRIC)

Submitted by Dr. I. E. Crack, Hamilton, Ont., Can.

(SEE CLIN. MED. AND SURG.,
JUNE, 1931, P. 430)

Recapitulation: A pregnant woman, under the care of her physician, rather suddenly developed fairly typical symptoms of kidney failure and uremia, with twitching of the arms and legs, but no true eclamptic convulsions. Her blood pressure was 180/110; she was voiding about 600 cc. of urine in 24 hours, which was loaded with albumin but showed no casts; her blood urea nitrogen was 57; creatinine 2.35.

She was hospitalized and on Feb. 18 the membranes ruptured, but there were no labor pains. A carefully performed vaginal examination showed a breech presentation. The next day a cesarean section was performed and a living child was delivered.

For the first 24 hours the woman seemed to do well; but on the third day after the operation she began to vomit, her abdomen became distended and the quantity of urine grew less. She died on the fourth day.

Requirement: Discuss cesarean section versus expectant treatment in toxemia of pregnancy.

DISCUSSION BY DR. W. J. BLOUNT,
MILLRY, ALA.

It is understood at the outset that we have a serious problem with which to deal, and it is just this type that tries the very soul of the obstetrician.

The premature rupture of membranes in a primipara always, to my mind, presages trouble, especially if associated with any abnormal presentation.

In this case, with hospital facilities, it probably was apparently the easiest way out of the difficulty to do cesarian section; but if there was no disproportion to contraindicate the delivery normally, I should have given the patient large and repeated doses of bromide (60 grains — 4 Gm. — every 3 hours) and calomel, 60 grains (4 Gm.) at one dose, followed, in 2 hours, by magnesium sulphate, 20 cc. of a 10-percent solution, intravenously, repeated each three hours until either free elimination was established and labor terminated, or until the blood pressure was reduced and nervousness controlled.

In my hands this treatment has been successful and, while most babies are still-born, I have yet to lose a mother since beginning this regime, and even with convulsions and blindness they clear up early, with faculties dim at first, but with complete recoveries.

I might add that I am nearly a hundred miles removed from a hospital and handle about 75 obstetric cases yearly.

DISCUSSION BY DR. E. J. HAY,
ROGERS, N. M.

The later symptoms in this case indicate that the kidneys failed to carry their double load.

My idea of the most essential treatment in such cases is free blood-letting and the free use of Nephritin, aided by potassium citrate.

This was a desperate situation and required heroic treatment. I should have taken immediate steps to terminate the pregnancy, especially in view of the fact that the patient was near term. My tendency would be to attempt to aid delivery by the natural route, rather than by cesarean section, as uremic patients are poor surgical risks.

Since I began using Nephritin at the first indication of uremia, and continuing its administration until several days after confinement, I have seen no such serious conditions as this develop.

DISCUSSION BY DR. E. C. JUNGER,
SOLDIER, IA.

It is inadvisable to criticize too severely the management of a case without knowing the details of the patient's life and surroundings—whether she was rich or poor, a worker or a loafer, a glutton or a delicate eater, a neurasthenic or a robust person.

The stalwart Scandinavian women whom I treat would thrive on heavy work, which would produce copious sweating.

I should have given this patient (as nearly as I can judge at a distance) enough magnesium sulphate to produce free catharsis; no food except raw or cooked green vegetables; and no salt. Judicious blood-letting might have helped.

Spontaneous delivery, if it can be attained, is decidedly preferable to cesarean section.

CLOSING DISCUSSION BY DR. MAX
THOREK, CHICAGO

Dr. Crack asks us to criticize the handling of his case, and discuss, particularly, the merits of cesarean section, compared with the expectant treatment in toxemias of pregnancy.

While this is a problem of particular interest to the obstetrician, nevertheless the condition became one of surgical obstetrics. Every physician practicing in a smaller community, where hospitalization is often out of the question, should be a good all-around practitioner and know, at least, what to do and how to serve his patient best when confronted with a situation demanding prompt action and good judgment.

When Dr. Blount states, "It is just this type of case that tries the very soul of the obstetrician," he has hit the nail on the head.

If one could be positive about the etiology of the toxemias of pregnancy, one's road to proper therapy would be an easier one; but, inasmuch as the causes and the pathogenesis of these clinical entities are still a matter of conjecture, the judgment of the attendant and the evaluation of the various factors entering in a given case, will have to be the determining factors in the selection of a course of therapeutic procedure.

We still believe that the entrance of placental and fetal elements into the maternal circulation plays an important part in the causation of toxemias. Poisoning by substances formed or retained in the placenta are championed by some as the etiologic factors. Others adhere to anaphylactic reactions, toxemia of mammary origin, or that resulting from metabolic aberrations in the mother or child to be the poisons that precipitate the symptoms of these complex intoxications. The consensus, however, seems to lean toward the assumption of a metabolic derangement. The nature of the toxic substance up to the present, has not definitely been identified.

Whatever the cause of the intoxication might be, there is a coexistent insufficiency of the liver, the kidneys and the other emunctories, the failure of which results in an accumulation of toxic and effete materials, with the resultant chain of symptoms that characterize the toxic state and the consequent eclamptic attack.

I was rather interested in the statement of Dr. Blount, who has been so fortunate as never to have lost a mother. His success seems rather exceptional. While in general practice, some twenty-five years ago, my successes in conditions such as are under discussion were not so brilliant as those of Dr. Blount.

No less an authority than Stroganoff, who has the lowest mortality rate reported, was fortunate to get away with a maternal mortality of about seven percent. Other authors still register a maternal mortality anywhere between twenty and twenty-five percent.

In the treatment, prophylaxis plays a decidedly important role. A great deal can be done by studying the metabolism of the patient.

In larger centers, cooperation between

a good internist and a well-trained obstetrician will often result to the benefit of the patient. In smaller communities, where a man has to resort to his own ingenuity, everything should be done to assure free elimination of accumulated toxins.

Medical measures are legion. Standard procedures often give surprisingly good results.

Sometime ago, the serum treatment was much in vogue. This consists of the introduction, subcutaneously, of 8 or 10 cc. of blood serum from a Wassermann-tested pregnant woman, at or near term or during labor. The serum may likewise be made from healthy placental tissue. This method is still on trial.

We hear a great deal about the therapeutic value of *veratrum viride*. It is still being highly praised by many American writers, but no less an authority than Williams obtained no results from its use, and in Summers' statistics, he recorded a maternal mortality of forty-five percent.

To discuss fully the various medical methods lauded by their champions, would carry us too far afield.

Let us now consider the surgical aspects of treatment in these cases.

I believe that, in cases that show a total suppression of urine following delivery, renal decapsulation (Edebohl) should be tried.

In instances where the attendant has done everything from a medical point of view, and he finds that his patient is not improving, but shows a tendency to become worse, surgery should be resorted to. Procrastination means gambling with a patient's life.

With an increase in the number and severity of the convulsions, it is a safe rule to follow, to evacuate the uterus. *Do that promptly*. Do not wait until the toxemia has nearly destroyed both mother and child.

Take advantage of what surgical procedures offer, while you know that your patient is in the best possible condition. The nearer to term, the easier the procedure of evacuating the uterus. This may be accomplished either by the induction of labor (provided, however, that the patient's con-

dition is not too desperate), or, if the condition of the patient is grave, rapid manual dilatation, with delivery of the fetus should be promptly resorted to. If the cervix is unyielding, as it often is in primiparae, vaginal hysterotomy should be done. I personally prefer this method to cesarean section. Toxic patients stand vaginal intervention better than the more serious suprapubic procedure (cesarean).

Many authorities consider classical cesarean section only when there is a distinct indication for its performance (contracted pelvis, tumors, etc.). The vaginal route, as stated, is given preference by many.

However, in the case under discussion, it seems that the patient stood the cesarean section well. Therefore, as far as the operation is concerned, and judged by the post-operative progress, the operation was not the cause of death.

We were dealing with postpartum toxemia. Here the treatment consists of elimination and free purgation. Apparently all of this was done. I fail to see where anything else could have been resorted to to save the patient's life.

I admire Dr. Crack's request for criticism. It is by comparing opinions that we improve our store of knowledge.

PROBLEM NO. 8 (ETHICS)

Submitted By Dr. W. L. Casler,
Marquette, Mich.

A physician in general practice, who does a large amount of work in obstetrics and pediatrics, has fitted up, especially for the youngsters, a cubicle in his office, on the walls of which hang pictures of several of the babies he has delivered.

On the first birthday of every baby he brings into the world, he sends a neat and simple birthday greeting card, with a small picture of himself; the phrase, "Your first doctor sends you greetings on your first birthday"; and a pleasant little verse—nothing more. Neither his name nor address appears anywhere on the card.

Requirement: Can either of the practices mentioned, especially the sending of the birthday card, be reasonably regarded as violating the code of ethics?

THE · CLINIC

UROLOGY

Renal Calculi*

By Winfield Scott Pugh, B.S., M.D., New York City

THERE is a general impression that renal calculi are especially common among the wealthy, or at least those who "live well." This idea is erroneous, for they are common among patients in a charity hospital.

A study of the underlying factors associated with renal calculus in the Orient, where the food supply is meager, to say the least, readily permits the elimination of food as an etiologic factor. My own observation of several thousand cases has strongly inclined me to the theory of obstructive uropathy, plus infection.

Looking over histories and skiagrams, one sees here many very large stones. In this there is certainly an element of neglect, as many of these folk simply have to trudge along until the burden becomes too great and they must cease their toil. Remember, however, that while, in some cases, it takes the stone years to become massive, in others it may assume gigantic proportions in a few months or even weeks. Every case of renal stone is a definite problem in itself and I have selected several which I hope will elucidate some of the difficulties encountered.

Case 1: Mrs. B. L., white; age 38; married; native of Italy.

Chief complaint: She says she has "rheumatism" in the muscles of the back. Pain in the back, particularly over the renal region, in an adult of this age, should cause one to think of several conditions. In the female, particularly one who has borne many

children, one should call to mind renal calculus, incident to urinary displacement and consequent interference with the kidney excretion. This woman has given birth to twelve children.

In the case at hand, it is more than likely that the *bête noir* of pregnancy, pyelitis, has been in evidence at least once. If this be so, it is the ideal nidus on which to build a stone.

While we are on the subject of back pain in women and its relation to stone, do not forget that these aches over the renal region are often caused by *urethral* disease, particularly stricture. In that case, great relief is often given by one passage of the cystoscope.

Aside from the foregoing, there is little of import that we are able to elicit in the family or previous personal history.

This patient is well developed, having a tendency to stoutness. About one year ago (it would seem to her just after the last pregnancy), she noticed attacks of "rheumatism" or lumbago. The pains were not those of a typical renal colic, but rather an ache of a rheumatoid type—never radiating, but sharply limited to the area of the left costo-vertebral angle. This annoyance was mostly noted at night, when the patient was apparently comfortable in bed, and but rarely appeared diurnally. At first the pains were about a month apart, but have since been arriving a little earlier. Six months ago, pains began to appear on the right side and were of a similar nature and identical location, but of less intensity.

*A clinical lecture to medical students of Cornell Medical College.



Fig. 1.

With the appearance of the pain on the right side, it was also noted that the urine was being passed a little more frequently and in considerable amount; another observation being that the urine was very pale—in fact, almost colorless. This large amount of fluid seemed to be voided regardless of the intake quantity.

While this is all we have been able to obtain from the history, the facts are most significant, suggesting a left renal stone and over-compensation on the right side, tending to a hydronephrosis.

UROLOGIC EXAMINATION

The passage of an Otis silk bougie, No. 26 F., through the urethra reveals no obstruction in that canal. A No. 15 F. soft catheter now enters the bladder and we withdraw an ounce or two of very clear urine; sp. grav. 1.007; of a slightly acid reaction; no albumin; no sugar; no red or white cells; and a very few anatomic elements. A few calcium oxalate crystals are the only other items in the sediment.

While we are doing this, the technician has taken a plane x-ray picture in the recumbent position (Fig. 1), which at once gives the suggestion of a calcified mass just over the left pelvic brim, probably in the kidney.

The cystoscope enters readily. On looking about the urethra and vesical neck we note little of importance. The bladder, however, looks "old" for one so young. It is somewhat trabeculated or gnarled. We

find that a No. 6 Charriere catheter passes readily to the pelvis of each kidney. The cystoscope is at once withdrawn and the catheters left in place. A sterile test tube is attached to the lower end of each tube and kidney specimens are collected. Both specimens seem very clear. The tube on the right fills rapidly, with intermittent spurts. There we would obtain four overflowing containers, to one on the left side. This is very suggestive of hydronephrosis. These specimens are examined for urea and microscopic elements. Another specimen is taken for cultures.

We now inject, into the median basilic vein of the left arm, 1 cc. of phenolsulphonephthalein, commonly known as p.s.p. A third set of tubes is now attached to the catheters, in the bottom of each being a few drops of 25-percent sodium hydrate solution. From a normal kidney, the p.s.p. should appear in the tube in about three minutes, coloring the alkali a light canary-yellow color, soon changing to a deep red. We note that the dye appears on the right side in about twelve minutes and on the left in about five.

Kidney Urine Specimens

	Right	Left
Reaction	Acid	Acid
S. G.	1.007	1.012
Urea	0.4	0.75
P.s.p. appears	12 mins.	5 mins.
First hr. P.s.p.	7%	10%
Second hr. P.s.p.	12%	15%
Cultures	Staph. Alb.	Staph. Alb.

The Pyelogram: With what has gone before, it becomes apparent we should know more of the kidney detail, so we shall make a bilateral pyelogram. In answer to criticisms of this procedure, the so-called anurias following this method are rare. I have analyzed all the cases and it is extremely doubtful if the pyelogram has anything to do with it. Second, one may be led astray by symptoms and work on the wrong side. Frequently we find more pain in a compensating kidney than over an organ largely destroyed. Third, an additional cystoscopy may be necessary, adding to the expense and annoyance, for, in the average hands, cystoscopy is no joy ride. Last, in the bilateral picture one has a



Fig. 2.

splendid comparison, as is well shown in this case (Fig. 2).

I inject each ureter with a 15-percent sodium iodide solution, the pressure not exceeding 40 milligrams of mercury. In this case it required about 10 cc. for each side. If a pressure apparatus is not available, remember not to increase hand pressure beyond the point of slight pain.

THE PYELOGRAM

On the left side we have a stone. Notice the light area extending from the pelvis of the kidney well out toward the cortex. See how accurately it adjusts itself to the stone shown in Fig. 1. The rest of the white shadows represent partial renal disintegration. On the right side we see a markedly dilated renal pelvis and calyces. Really this is a typical picture of so-called internal hydronephrosis. On the right side we withdraw the catheter and made a pyeloureterogram. Notice also, in these pictures, the apparent sagging of both kidneys.

SUMMARY

- 1.—The history of numerous pregnancies, with a possible pyelitis.
- 2.—The plane x-ray picture showing a calcified retroperitoneal mass.
- 3.—The appearance of the urine, markedly suggesting hydronephrosis.
- 4.—The complete urologic examination, with the bilateral pyelogram, completed the building of our diagnosis, which is: *left renal calculus and right hydronephrosis.*

TREATMENT

It is a simple thing to say, do a nephrotomy or a pyelotomy; but he who assumes responsibility must look beyond the horizon of doubt. It is important to clear up the diagnostic fog before we open a kidney. All these patients should have good kidney function, in order to render them safe risks. We can afford to wait in this case.

Place an indwelling catheter in the right kidney pelvis and drain it until the function is improved. I have heard this procedure questioned, but try it. Leave the catheters in place until you attain success. After this, cut down on the left kidney, make a transverse incision (posterior pyelotomy) into the pelvis and, I am sure, we will have to carry this incision well into the kidney substance, as the stone is large.

The lesson I have striven to teach in this case is: never rush into a surgical procedure on the kidney without a very careful examination and consideration of all the facts. Nephrectomy may be necessary when one least expects it. Try to leave your patient with one good kidney should it occur.

Case 2: Z. L.; white; age 61; widow; native of Austria; a seamstress.

Mrs. L. comes to us also complaining of "rheumatism." Do not forget to examine carefully the cervix and adnexa, in the female, and the prostate, with the seminal vesicles, in the male, in such cases. It is my firm belief that most of the so-called rheumatism originates there. This woman wants her "rheumatism" treated and is rather loath to accept any of the so-called modern methods offered for her relief. She wants some pills. Attempts to obtain a real history, therefore, give us little information. We do not, at all times, regard this as a misfortune, as it requires all our resources to establish a diagnosis.

The family and previous personal history are so vague that one can elicit nothing. The "rheumatism" in her back, she says, begins at the costo-vertebral angle and extends down toward the pubic joint. It is not severe, but dull and "achy," occurring at irregular intervals. The internists have been over her and, aside from marks of premature senility, they find little of pathologic import.

The patient denies any urinary symptoms and declines to be catheterized. A urine specimen shows the urine to be almost white, thick, slightly alkaline and having a specific gravity of 1.028. There is a

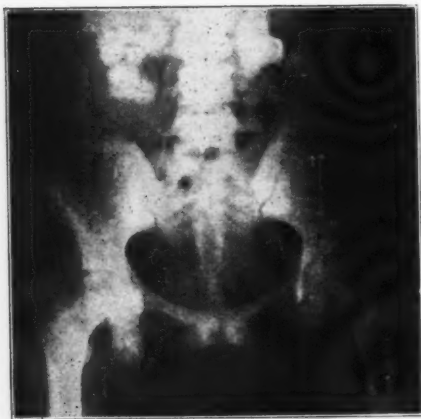


Fig. 3.

marked sediment, which is loaded with pus. A vaginal discharge is also present. The urine is, in such instances, often contaminated by pus from an old vaginal discharge. In this one we will probably also find *Trichomonas vaginalis*. This is not rare and responds well to irrigations of tincture of green soap, 50 percent.

From this woman's appearance, we are convinced that there is something much more serious than lumbago here. Mayhap, if we can in some way convince her, she will be more amenable to examination and treatment. We will try skiagraphy. We have taken the picture which is shown in Fig. 3. On the left side there is found a hatchet-shaped mass which occupies the pelvis and extends into all the calyces. I also rather suspect a peculiar rotation of the kidney. The mass is a typical coral stone. On the right side we see a complete outline of the kidney formed by calculi and the organ itself seems to be almost entirely calcareous. The intern has succeeded in partially accomplishing a p.s.p. test, by giving her plenty of water and a hypodermic injection of the dye. He figures that she has an elimination of about 15 percent in the first hour. The other reports are valueless.

TREATMENT OF BILATERAL CALCULI

What can one do where there are stones in both kidneys? Frankly, in this particular case, we can do nothing at present, or at least until the patient's kidney function

is improved. These cases do very badly under general anesthesia and there is a marked tendency to anuria. I am not at all satisfied with our results of regional anesthesia in kidney work and most of the spinals are only partly successful (the mere saying that an anesthesia is 60 percent is, in itself, sufficient condemnation). Paravertebral anesthesia alone is a considerable operation and but few are competent to carry it out.

Renal surgery is always difficult and complications occur all-too-frequently. In a report of 370 kidney cases in one large hospital, we note the following as the most common annoyances: shock, 10; hemorrhage, 8; postoperative hemorrhage, 2; cardiac complications, 7; embolus formation, 1; fistula discharging pus and urine, 6; anuria, 2; pneumonia, 1; septicemia, 1; abscess of kidney, 4. This is quite a satisfactory record; most are not so good.

There are also a few facts to remember in connection with renal stones: (1) Among adults, we find that about 12 percent of stones are bilateral; (2) in childhood, about 6 percent are on both sides; (3) the bilateral stones are multiple in over 60 percent of cases; (4) large bilateral renal stones are not necessarily surgical cases unless an emergency, such as a renal block, exists; (5) any operation on a kidney usually destroys some of its substance; (6) sutures usually destroy additional substance; (7) these destructions usually extend wide of the operative area; (8) if you could see the histologic damage you would be still more shocked; (9) in all these procedures, therefore, there will be a reduction in kidney function. Will our surgery carry it over the margin of safety?

I feel, therefore, that in this case surgery is not warranted, unless there is evidence of a block, as all function is bad. We can aid this person considerably by frequent courses of fluid and pelvic drainage by means of ureteral catheters.

We become more conservative in treating bilateral renal stones as our experience ripens. Kidney problems such as that here presented are always intriguing and one cannot see enough of them. Frankly I have brought this case before you as a fine example of those which should be left alone.

30 East 40th Street.

CLINICAL · NOTES

AND

PRACTICAL · SUGGESTIONS

Appendicitis and the Practitioner

THE article in the May issue of CLIN. MED. AND SURG., by Dr. Collins, on the old familiar subject "Appendicitis," has made me want to say a few words.

Constructive criticism is beneficial. It has done wonderful things for our profession; but criticism without finding out the facts is often very unjust. I have read Dr. Collins' articles a number of times. His criticism of the poor general practitioner may be warranted but, knowing so many of our tribe, I feel that it is not.

I am not a surgeon. I belong to the "fast disappearing tribe of general practitioners." I have had my share of "surgical abdomens" to take care of, and I thank the "Giver Of All Good" that we do not have many surgeons near my home whom "Experience had taught not to operate on a patient with general peritonitis and a distended abdomen" from a ruptured appendix.

If there is a local peritonitis, it usually means that a slow leak is present, and Nature has had time to wall it off; but where there is a general peritonitis it usually means a sudden rupture with too much rapidly-spreading pus for the peritoneum to be able to wall it off. These suddenly-released pus germs continue to multiply after their entry into the peritoneal cavity. How can one expect a patient, already extremely ill, to handle this diffuse infection without help from the surgeon? What help can be given? I am absolutely convinced that merely establishing drainage will give the sick patient a chance to overcome much of the trouble. I do not believe in going down

and hunting for a retrocecal appendix, but if the appendix can be reached, with a minimum disturbance of the bowels, by all means take it out and stop adding to the peritoneal infection by the constant drainage from the primary seat of the infection in the appendix. Give the pus a chance to drain out and I believe you have added greatly to your patient's chance of recovery.

In Dr. Collins' report he says, "His physician saw him (the patient) that night (April 1), and on April 2 and 3"; and later he says, "This was 37 hours after the beginning of the attack. Then his physician sent him to the hospital."

I have been up against this kind of a proposition many times. If we had the power to forcibly take patients to the hospital, then and only then could universal blame be put at the general practitioner's door. Unfortunately, owing to the great expense involved and the fear of operative procedures, the patient and family hold back until the family doctor does not have time to get the sick person to the hospital until after the damage is already done.

Later he says, "It is the duty and responsibility of the attending physician to make his diagnosis and get the patient under the care of a surgeon in time to have the appendix removed before it has perforated, or before 36 hours have elapsed. This requires rather fast work." I'll say it does, especially when the patient puts off going to the hospital until he realizes that it is his only salvation or, as is often the case, we do not see the patient until 24 or even 36 hours after the start of the trouble!

I do not wish to start a fight. I do not have a chip on my shoulder, ready for someone to knock off. I think I have the proper reverence for the F.A.C.S. All we ask is a chance to prove that we do not recommend salts or oil or Adierika or any laxative or physic in cases of appendicitis. I have had these things given to patients of mine numerous times, even when I explicitly told them the dangers. The surgeons forget that, as a rule, we have to treat cases without nurses. The family is anxious to do everything possible to help, and yet they will many times take the word of some well-meaning friend, and do the very thing that the physician has cautioned them against.

I have quite a large acquaintance with other members of our tribe of general practitioners and I feel sure that, in a very large percentage of cases, hospitalization is urged just as soon as a "surgical belly" is diagnosed; and it takes a very short time to diagnose such a case. The delay comes in getting the patient or relatives to see the need of haste.

Please do not understand me to be putting myself up as a critic of good surgeons, for that is far from my thoughts. I do not like, however, to be blamed for delay when it has not been my fault.

F. H. RHOADES, M.D.

Hanover, Kans.

Dr. Collins Replies

I AM VERY sorry that Dr. Rhoades has read things in my article on appendicitis that were not in it. No one has a higher regard for general practitioners than I have. I was a general practitioner, for the first twelve years of my professional life. My article was intended to be a plea for closer cooperation between the general practitioner and the surgeon.

I was careful to state that delay in bringing the patient to the surgeon may be the fault of the patient or relatives. Certainly the mistake is usually made because the patient or relatives do not follow the advice of the family physician, as is the case in Dr. Rhoades' practice.

I have talked over the question of operation on a patient "with general peritonitis and a distended abdomen" with a large number of surgeons, and the majority of them agreed that surgery offered very little for the patient in that condition at that time. As Dr. Ochsner pointed out years

ago, the depressing effect of the anesthetic and the shock of the operation lower the resistance of the patient and lessen his chances for recovery.

The fact remains that the mortality rate in appendicitis is increasing all over the country. All are agreed that the increased rate is not due to surgical treatment *while the inflammation is limited to the appendix*. The increased rate is caused by the peritonitis that follows the appendicitis that is permitted to go on to perforation.

My plea is that the public, and the general practitioners who need it, be educated to get the patient to the surgeon in time for the appendix to be removed before the perforation occurs. If the surgeons continue to operate during the active, acute peritonitis, and thereby accept responsibility for the errors of others, the present mortality rate will continue.

I am grateful to Dr. Rhoades for giving the profession his views on the subject. Differences in opinion make horse races (and other things) interesting.

CLIFFORD U. COLLINS, M.D.

Peoria, Ill.

Family Doctors*

AFTER being long bombarded by articles challenging their very existence, a representative of the family doctors has come to their defense. Dr. Wingate M. Johnson, whose answer to the attack appears in the *March Atlantic Monthly*, is a general practitioner. He admits that the high cost of medical care for the middle class is a serious problem. But he does not believe it can or should be solved by any of the plans suggested by people who dispense advice to the profession. The modern family doctor should take the place of the old family doctor whose obituary is being written every few days. He need not be a general practitioner, but he should have had enough practice to be able to direct a patient to the proper specialist.

In the matter of fees, Dr. Johnson thinks that public sentiment is unjust. The cost of everything else has gone up, and it is unreasonable to expect the cost of medical care not to follow. By selecting the right sort of man for medical adviser, a family may be sure that he will do his best to merit the confidence reposed in him. His personal interest in the patient and the pa-

*From the *New York Times*.

tient's family and his professional pride insure his zeal. Such a guardian of the family health is worth more to the family than the occasional emergency care of a specialist or the disinterested attention of a medical firm or a public clinic. He is worth more and he costs less.

Dr. Wingate's replies to specific criticisms are practical. He believes in specialists when they are genuinely suited to the narrow field they choose. He thinks it is important to keep abreast of medical progress, but he also thinks that the talk of the difficulty of keeping up with new discoveries, treatments and inventions is mostly nonsense. A good family doctor is not confused or baffled by new steps in medical science. On the contrary, as Dr. Crookshank wrote recently in the *Forum*, "Real science simplifies and does not confuse; it synthesizes and leads back to first principles, so that men of intelligence and judgment can with ease keep themselves abreast of the best opinion."

Cancer of the Intestine

THE great anatomist Leidy, of the University of Pennsylvania, remarked that he would not pass a dental student in anatomy who did not know something about his insides. Not that it was necessary for a doctor of dentistry to have this knowledge for the care of the teeth, but everyone should know something about the stomach and intestines and their function.

We have no explanation why cancer of the small intestine is much less frequent than cancer of the large intestine, and why ulcer of the duodenum is very common and cancer of this portion of the intestine very rare.

Just as in cancer of the stomach, so in cancer of the intestine, there are no specific symptoms. But whether the trouble is due to cancer or not, the patient will be distinctly and amply warned. The symptoms may be "indigestion," if trouble is in the stomach, or colicky pains exactly like those one had, when younger, after eating green apples. There may be constipation or diarrhea; or there may be a more distinct warning, like blood in the stools. None of those symptoms necessarily mean cancer. Nevertheless, they should be answered in but one way—by a thorough examination. The x-rays, in fluoroscope and film, give the exact map of a normal intestine. Any de-

fect, whether due to cancer or not, will be shown.

The rectum is accessible to the eye of the examiner, with the proctoscope. Cancer or any definite organic lesion that precedes cancer can be detected by direct observation.

Cancer of the intestine does not grow so rapidly as cancer of the stomach, so delay is not quite so dangerous. Today, more cancers in this part of the bowel have been cured. In some clinics, cancers of the bowel were cured previous to 1900. Practically no cancers of the stomach were cured until 1910.

We do not know the cause of cancer of the stomach and intestine. We, know, however, that all those measures which prevent constipation and indigestion of any kind are protective and make abdominal symptoms so infrequent that, in groups of people who take these precautions, any form of indigestion should be considered suspicious of a possible cancer or any organic lesion that precedes it.

We have educated the majority of people in regard to appendicitis. We will soon have them as well informed about the intestines.

JOSEPH COLT BLOODGOOD, M.D.,
Baltimore, Md.

The Anti-Vivisectionists

THE medical profession seems to have convinced the Illinois legislature of the gross fallacies, inherent cruelty, and political imprudence of the bill to prohibit medical experimentation on dogs. This bill, designed as a preliminary to a prohibition of experimentation on any animals, has been rejected by the house judiciary committee, the vote being 31 to 4. After all, there seems to be more political judgment in defending human beings than in defending animals—though it should be added, incidentally, that the suffering of most domestic animals has been tremendously relieved through the medical discoveries resulting from experiments on a negligible minority.

The house committee did not bother to hear the arguments of several physicians and physiologists from the medical schools of the leading universities in the state. It is deplorable that these men, some of them distinguished throughout the world, should have been forced to divert time and energy from their work during the past few

weeks in order to participate in the defensive war of the medical profession against a thoroughly benighted piece of legislation.

The medical profession knows that the perennial agitation in recent years against experimentation on animals has largely been incited by a species of racketeer, who preys on the ignorance of the layman. Any state in the country is probably easy game for organizers of anti-experimentation drives. Dog-lovers and cat-lovers are told lurid stories of brutality in the medical schools; members are enrolled; fees are paid; handsome salaries or commissions are pocketed; the press is circularized with nonsensical yarns; public ceremonies are held, so that medals may be pinned on valiant dogs; and a drum-beating parade is started toward the state capital. This racket is bound to remain lucrative until it becomes too crowded; the organizer has nothing to fear except an invasion by other men of his own type.

It is not very important that organizers of the antiexperimentation campaigns do this sort of thing for a livelihood, or that the zealous members of the societies are gulled and defrauded. But the important fact is that people who really count—the outstanding physicians and physiologists from the best universities of a state—should be forced to turn aside from their work in order to refute the trashy propaganda of the racketeers and their dupes.—*Editorial in Chicago Journal of Commerce*, Apr. 18, 1931.

Leukocytes and Wound Healing

CARREL said, in 1922, "The existence of mechanisms causing leukocytes to invade tissue in need of repair is certain. The initiation of healing seems to depend on the coming of leukocytes to the wounded tissues. These leukocytes have the important function of promoting cell multiplication in the parts of the organisms where they accumulate under certain conditions."

This determination and conclusion of a great immunologist has been accepted as an interesting fact, perhaps, by the medical men who may have seen Dr. Carrel's paper, but observations in hospitals, clinics and offices, where wounds are treated, indicate that no application has been made of the knowledge of this solution of one of Nature's riddles. Treatment is confined to the

local application of antiseptics and germicides, over or in the lesion. Although, if the wound is healed, and Carrel's conclusion is true, this phenomenon must follow the activity of the purely natural forces of repair—the white blood cells.

On January 12, I had the good fortune to see an infected lesion of the lobe of the left ear, which began three weeks previous. The lobe was swollen, and occasional flashes of itching were said by the patient to be disagreeable. This lesion furnished an opportunity for a clinical determination of the truth of the conclusion of Dr. Carrel, that leukocytes are the active agents of healing, for, if the white cells were engaged in this effort of healing, a count of the phagocytes in the blood, taken from the margin of the lesion, would show a much greater number than in blood taken from the general circulation.

These determinations were made and the white cell count of blood from the margin of the lesion was 13,900 per cmm., while that from an index finger showed 12,000 per cmm. So far the truth of Dr. Carrel's conclusion seemed to be supported.

The lesion had been apparent for three weeks and the patient said that there had been no appreciable increase in its size for about two weeks, so it might be granted that the increased number of mobile white cells about the lesion prevented the further spread of the infection. The further conclusion seemed inevitable that, if 13,900 white cells to the cmm. could prevent or inhibit the spread of the infecting microorganisms, an appreciable increase in the numbers of these little bodies would result in healing of the wound.

Since such lesions are frequently accompanied by a demonstrable reaction of the blood, a Wassermann test was done and was found to be plus 1. Since I did not know of the luetic infection at the time of this first visit, I stimulated the leukocytes with hydrochloric acid, 1:1,500, injected intravenously.

I saw this patient again on Jan. 16—four days after the injection of the hydrochloric acid solution. The healing of the lesion was marked; the lobe of the ear much less swollen. So, with a fair degree of assurance, I predicted a marked decrease in the white-cell count of the blood from the infected lobe. This prediction was verified by the finding of 10,750 cells per cmm.

My observation of the behavior of this

wound, in a patient with syphilis, after the stimulation of the leukocytes with hydrochloric acid, instead of with the usual anti-syphilitic drugs, arsenic, bismuth or mercury, strongly supports the truth of the conclusion of Dr. Carrel, that healing depends on the coming of leukocytes to the wounded tissue, and that infective organisms are eliminated by the phagocytic activity of these protective cells.

BURR FERGUSON, M.D.

Birmingham, Ala.

Notes from the Elgin (Illinois) State Mental Hospital

ON MAY 23, 1931, the Chicago Neurological Society held its meeting at the Elgin State Hospital, which furnished an opportunity to see that excellent and beautifully-situated institution for the care of the mentally diseased.

Dr. Joy Ricketts, of the staff, is pleading for a training school for attendants for such hospitals*. These students need not be trained nurses and should include both men and women, having at least a seventh grade education, twenty or more years old and in robust health. The course should last two years and should include the elements of first aid, hygiene, physiology, anatomy and nursing; the basic facts of psychiatry and the classification of psychoses; the ethics and technic of boxing, wrestling and judo; and hospital etiquette; as well as practical experience in the handling of all types of insane patients.

Dr. Mary G. Schroeder is trying an interesting experiment with a group of mentally deteriorated women patients, who had habitually sat, sunk in semi-stupor and mumbling to themselves. She bought twenty or thirty pairs of roller skates and put them on some of the least apathetic patients, who thereupon began to skate with vigor and enthusiasm. Others began to wake up a little and, when we were there, every pair of skates was in use, by women who had shown no interest in anything for months.

Their occupational therapy department is large and fully used, with good effect. Most of their work is in various types of weaving and other textile fabrication.

For pyretotherapy they prefer the "electric blanket" to diathermy, as the former requires no cooperation on the part of the

patient, is more nearly fool-proof and is slightly less uncomfortable. They put the patient under the treatment at 8:00 A.M., and about an hour is required to break down the heat-regulating mechanism, after which the temperature rises, during the next two hours, to 104° to 106°F., where it is maintained for two or three hours and then gradually reduced to normal. The treatment, which is repeated on alternate days, requires from six to eight hours and the patient's lose from six to eight pounds in weight. Malaria and protein shock are also used to produce artificial fever.

It is a valuable experience to observe the truly constructive measures which are now being employed in the treatment of the mentally ill and the highly encouraging results which are being obtained in a class of patients recently considered as hopeless.

GEORGE B. LAKE, M.D.

Chicago, Ill.

Behavior Clinic for Criminals*

THE Behavior Clinic of the Criminal Court of Cook County, (Ill.) came into formal existence April 1, 1931. It is a diagnostic psychiatric service, organized in the Division of the Bureau of Public Welfare of Cook County, to serve in an advisory capacity to the judges of the Criminal Court. This clinic is to examine defendants referred on order of the Chief Justice or the presiding judge in the case. The plan is that such defendants be referred after conviction and before disposition is made. Organization has been non-political, the choice of director being left to the Chicago Institute of Medicine.

The Behavior Clinic is concerned primarily with the social adjustment of individuals who have already come into conflict with society. In order to have sufficient data on which a judgment as to whether such individuals can adjust or not, a social history and investigation are necessary. It is fairly axiomatic that both innate (so-called) personality of constitutional make-up, and environmental factors as well, must have cooperated as responsible agents in causing the antisocial or criminal conduct.

The necessity for close cooperation between the psychiatrist and the psychiatric social worker has become increasingly evident. The doctor, seeing the patient before

*An article on the subject appeared in the *United States Daily* for May 8, 1931.

*Adapted from *Bul. Chicago Med. Soc.*, May 16, 1931.

him, can evaluate his personality in terms of his impulses and wishes; he can ascertain or rule out mental disease; he is able to learn from the patient that patient's own reaction to his background and environment. What he is not able to do, or to take the time to do, is either to go into a long and detailed examination of that history and background, or to go out into the environment, investigate the patient's home background and supplement the patient's own statement by those of his relatives, friends, employers and other persons nearest to him who were concerned with his previous experience and who will be able to evaluate it more objectively than can the patient himself. Since what is proposed is at least the possibility of returning the patient to this environment, then only such study of the part in society to which the man is returning can give any indication of how suitable or unsuitable it is to aid him in a better adjustment than he was able to achieve previously. The welfare of both the accused and the community in which he lives are so intimately concerned with what will happen if he does so return that such preliminary study would seem to be the first requisite to intelligent after-care and supervision.

It is not generally known and appreciated that over ninety percent of the men in the County Jail have not been convicted of any crime. They have been "arrested," they are "accused," they are "under suspicion," but they have not been convicted. There is a legal presumption of innocence; but there is no social presumption of innocence.

It is interesting to notice how differently this community attitude operates in the case of a man who has enough money to go out on bonds. Those who know of such a person's arrest may differ in their opinions as to whether he did the act of which he is accused; some of them are dubious, some of them feel he might well have committed the crime, while still others are sure he could not have done so; but the community in general sees him going about, ostensibly a free man conducting his usual business, and knows nothing of his private affairs. About the man, on the other hand, who does not have money to furnish bail and finds himself in the County Jail, the community has no doubt. It is not concerned with whether a trial has taken place or not; that man is a "jailbird."

Although the Behavior Clinic is not concerned to correct this social presumption directly, since it is not planned that examinations by the clinic will take place before trial and conviction, yet no small part of the clinic's function should be the enlightenment and education of the understanding of the community as to anti-social acts which culminate in criminal behavior. It has been proved again and again that interest and sentiment are not sufficient. Intensive study of the individual, on a scientific basis, is the only possible approach. This is what the Behavior Clinic of the Criminal Court of Cook County hopes to put into practice.

HARRY R. HOFFMAN, M.D., Director,
Behavior Clinic of the Criminal
Court of Cook County.

Chicago, Ill.

THE INCIDENCE OF MENTAL DISORDERS

The fact is that the normal human mind adjusts itself remarkably well to all kinds of complicated situations, but the mind with a flaw in its early making often cracks when meeting difficulties of a minor sort. With some evil factors less potent than formerly and others more so, it is fair to say that there has at least been no great absolute increase in major and minor mental troubles in the last hundred years.

On the other hand, while the incidence of infections and many other somatic diseases has been greatly reduced and the span of human life greatly lengthened, we cannot point to any corresponding reduction in mental ills.—DR. PETER BASSOE, of Chicago, in J. Missouri St. M. A., Aug., 1929.

THE · LEISURE · HOUR

Drifting

HOW frail the anchor! Yet such anchors hold
More strongly that they rattle with the tide;
The ship sways gently, left to right, and bold
No further than its length of chain may ride.

*Less safe to drift along uncharted seas
Trusting some force we neither guess nor know,
Sailing through shallows of forgotten ease,
Or surface-riding with no clutch below.*

*But anchored lightly, if such anchor hold
In spite of tug of tides or windy wiles,
A craft may swing too gently to be shoaled
Over the sands and rockways of lone isles.*

—ADA BORDEN STEVENS.

Newport, R. I.

How To Be Sick

THE doctors, the near-saints, the wise folk and fools, our friends and enemies are everlastingly telling us how to get well. But not one of them ever tells us how to be sick, and that is far more important. We will knock along some way and get well by the benevolent efforts of Nature and the passing of time, if they don't burden us too much with pills and potions, powders and plasters, and with grave looks, sad words and bad environment. If they will just give us some kind of chance we will gamble with it cheerfully.

Most of us have to be sick and no one tells us how to do it in a way to get the

most satisfaction out of it. In fact, it is very unsatisfactory any way and we need instruction in order to get the best results. We are buffeted about on the merciless waves of an ocean of uncertainty and don't know whether we are suffering correctly or not.

Every doctor should have while he is young, at least one good spell of illness, so he will know, by experience, how to sympathize and advise. Being a physician myself, I think one attack would do. He should have severe gripes and pains and aches; inflamed sore places that hurt; killing nausea and violent vomiting; palpitation

and breathlessness; arctic rigors and tropical high temperature; wretched backache; and mortal, agonizing nervousness and apprehension of impending evil. It is a sweet and valuable experience, when it is over, and warms to a glow his consciousness of human suffering. His sympathy then expands like a real, living thing. After he has suffered all this and more, and has been compelled to battle with painful environment, he becomes more like the dear old family doctor and knows better how to serve.

Will some one tell us how to be sick to the best advantage? That is the burning question. What shall we do with our restless hands? If we lay them down by our sides, they look so helpless—so much like a complete and hopeless surrender. If we fold them across the chest in a peaceful attitude, it seems as if we are "laid out." That won't do! If we turn on the side and lie on the arm it hurts; and then the arm "goes to sleep," as if that part of us were already dead. Our hands are more lifeless than the cold hands of the clock, and so pale; but where can we hide them from view? How would it do for the sick room to have stained glass windows; or to throw upon uncovered parts of the body a tinted light—a living pink. A pink kimono is an excellent garment for a convalescent woman. I tried my wife's kimono for a day, but found myself continually searching for pockets and had to take it off. It seemed that it was trained to feminine habits.

What should be done with those hot-cold feet? Shall we kick them out or cover them up or both? In pre-Volstead days we could have them rubbed with the "vile poison," and possibly enjoy the fumes; but not now.

Why not pull my leg and relieve my back? I don't mean in the symbolic way; that has been done by the oil companies. The tight muscles and ligaments are pulling and squeezing the tender little nerves between the joints. Just catch hold back of the heel and around the front of the foot and pull hard. That would be fine!

That light hurts. If someone doesn't screen the lamp and pull down the shades and stop the glare and relieve my nerves I shall be a painful shade myself very soon, searching for the celebrities of Dante's Inferno.

What shall be done about the infernal noises? My senses are acutely sensitive and the disturbing sounds seem to penetrate the very skin. What good does noise do in the world anyway, except to help the politician? Oh, if all noise could only be converted into music—sweet melody, entrancing harmony, soft tones attuned to nerves that are shattered and torn. Why not furnish me a string band to soothe me when I lift my finger. Music will be one of the essentials of treatment in the near future. Why not begin now on me?

And why not anticipate future methods and send me up in a balloon for some hours every day—up to a suitable altitude, far away from jazz and other noises, turmoil, dust and the poison-laden atmosphere which is taxing the blood-making organs and the ductless glands in the fight against the hosts of diseases? It might be expensive, but look at the saving in doctors' visits and public contributions!

What shall be done with that fool friend with the undertaker's face, whose sympathy is expressed by relating his experience at the bedside of a friend who suffered the same way as I do and died a horrible death? Now is the time to pray, to pray earnestly, for some good Samaritan to come and take him away. Just get him by the nape of the neck and put him out and *keep him out*. He is the nerve-wracking carbuncle of the sick room.

That other friend, who speaks cheering words while his face looks like a funeral, is almost as bad. May all the powers that be conspire to give me a doctor with a poker face, who can lie in the right way and keep me inspired with hope; and a friend of the same type would be appreciated.

The pessimist is another pest. Let the bees and the bugs and everybody and everything be bubbling over with optimism. It all helps. Of course it doesn't alarm me to see a little weeping around the house; my family knows me and might be expected to cry somewhat.

The doctor told me to compose myself; but I am already composed of more poisons, pains and aches and twitching nerves than my skin will hold, and it oozes out by way of the tongue, in more or less polite expressions. How can I compose myself?

"Now Nurse, how in the world do you

expect me to swallow such a capsule as that? Did the druggist suggest any way to get it down?"

"It is not so large."

"It is bigger than my throat."

"No, no, it won't be hard to swallow."

"Well, hand it here; the whale swallowed Jonah some how; the doctor must have heard about that."

Isn't there some way that medicine can be made pleasant to take? Looked at from my present viewpoint, it is an absolute necessity. What a difference it makes when it is my own palate!

Why should I be compelled to swallow food? My body and my vital powers will hold me up for a while. Pleasant drinks would be allright, if made of the right kind of stuff.

After much thought I have concluded that the only way to be sick successfully is to take the doctor's medicine when you have to and have no chance to dispose of it otherwise; to wail somewhat at the beginning, in order to arouse sympathy properly; and then to command the situation fiercely, get all the concessions you can, and get the last atom of fun out of it that is possible; and to treat the whole matter as a business proposition and put up a masterful fight for victory.

J. S. LANKFORD, M.D.

San Antonio, Tex.

A Short Respite

Patient: Why, Doctor, you told me to show my tongue, but you haven't even looked at it.

Doctor: No. It was only to keep you quiet while I wrote the prescription.—*Michigan Technic*.

Practitioner

"So your son's a doctor now?"

"Yes, he's a specialist."

"What does he specialize in?"

"Oh, everything."

—*Am. Legion Monthly*.

No Experience

He: "Do you believe kissing is unhealthy?"

She: "I couldn't say. I have never—"

He: "You've never been kissed?"

She: "I have never been unhealthy."

—*Exchange*.

From Missouri

"Waffo' you sharpenin' 'at razor?"

"Woman, they's a pair o' gemmun's shoes undeh you' bed. If they aint no niggah IN them shoes—Ah'm gonna shave!"

I wish I were a moron,
He never gives a darn;
He never, never thinks at all;
My God, perhaps I am!

"O Wad Some Power"

A backwoods mountaineer one day found a mirror which a tourist had lost. "Well, if it ain't my old, old dad," he said as he looked in the mirror. "I never knew he had this pitcher took."

He took the mirror home and stole into the attic to hide it, but his actions did not escape his suspicious wife. That night, while he slept, she slipped up to the attic and found the mirror.

"M-m-m," she said, looking into it, "so that's the old hag he's been chasin'."—*Med. Suggestions*.

Modern Etiquette

A dentist says that champagne ruins the teeth. The best people, however, don't bite the wire to release the cork.—*Punch* (London). No. They bite off the neck!

Ligneous Anatomy

Johnnie: "My sister has a wooden leg."

Freddie: "That ain't nothing. My sister has a cedar chest."—*American Stories*.

Tempora Mutantur

In 1898 the *Ladies' Home Journal* declared that it would avoid, in future, all reference to women's underwear, for "the treatment of the subject in print calls for minutiae of detail which is extremely and pardonably offensive to refined and sensitive women."

And now Kotex and its succedena are advertised on huge bill-boards along the highways!

The average expenditure in America, per person, for candy, ice cream and confections, is \$18.15. The average expenditure for books is \$1.10.

LET US SEE YOU FIRST and We Will DO You Good

We dispense with nothing but strictly pure drugs and never MIS-REPRESENT NOTHING TO ANYONE.

We have been OPERATING the sick and suffering continuously for 29 years IN THE SAME LOCATION for each individual year, and whenever we have left a place the inhabitants have been unanimous in saying that it has been

A GREAT BENEFIT.

We glory in the fact that once a patient comes to us HE NEVER GOES ANYWHERE ELSE!

DR. B. LUFFUM
DR. Q. U. HACK

Successful Treatment

In Canada a woman succeeded in permanently curing a case of indigestion by fasting for 55 days. And that is not all—she will never suffer from any form of sickness again.—*American Stories.*

Egotism is the gentle anesthetic administered by nature to alleviate the pain of being a damn fool.—STRICKLAND GILLILAN.

Sound Proof

Casey (after seeing Riley fall five stories): Are yez dead, Riley?

Riley: Oi am that.

"Shure, and ye're such a liar Oi don't know whether to believe yez or not."

'An' that proves Oim dead. Yez wouldn't call me a liar if Oi wuz alive."—*Bystander.*

Not Particular

"I want a revolver—for my husband."

"Did your husband say what make of revolver?"

"No, but I don't think that matters. He doesn't even know I'm going to shoot him."—*Passing Show.*

Ethics

Said Abie with all the curiosity of the younger generation: "Poppa, what is ethics?"

Said the father with all the accumulated wisdom of the older generation: "Ethics, my son, is when a customer comes in to pay a forty dollar bill and pays fifty dollars by mistake. Should you keep the ten dollars or divide it with your partner?"—*Boston Beanpot.*

In the Amphitheatre

Lo, what a change! She who, a moment gone,

Trembled with dread and wept with agony,
Now calmly lies, ungirt and bosom-bare
Beneath the knife and our more cruel eyes,
In the strong ether-sleep that stifles pain.
She weeps no more. Her soul is far away
In that new land which lies twixt death
and dreams.

Tranquil she roams where still and sailless
streams

Forever curve through meadows dimly fair.
What hath Man wrought? How many thou-
sand years

He cried in anguish to the un pitying stars
Whence came no help, until at last, at last,
He found the gift in Nature's willing hand.
Shall there not, then, be found a stronger
drug—

A drink divine that can the tortures soothe
From which our spirits daily, hourly die?
Ingratitude and parting, hate and fear—
For such as these is there a remedy
If we but knew, ah God, if we but knew!

JAMES B. FITZGERALD, M.D.,
Boston, Mass.

An expert is a man who has a little
ability and a lot of self-confidence.

Aphasia

Customer: "I want a pair of spec-rimmed hornicles—I mean sporn-rimmed
hectacles—confound—I mean heck-rimmed
spornacles."

Shopwalker: "I know what you mean,
sir. Mr. Perkins, show this gentleman a
pair of rim-sporned hectacles."—*Texas
Ranger.*

DIAGNOSTIC · POINTERS

Endemic Goiter and Mental Deficiency

Investigation, during the past two years, of the Detroit public schools showed that, out of 3,548 mentally subnormal children, 712 (approximately 17 percent) displayed some endocrine dysfunction. Of the 712 endocrine subjects, 281 were definitely the result of congenital hypothyroidism; that is to say, 8 percent of all mental defectives of the Detroit schools are due to endemic goiter.—DRS. O. P. KIMBALL and J. C. MARINUS, of Detroit, in *Ann. Intern. Med.*, Dec., 1930.

The Pituitary Factor in Arteriosclerosis

By experimental work on rabbits, it was found possible, by the injection of pituitary posterior lobe extract alone, without the influence of diet, to produce a suprarenal cortex hypertrophy, which is an important link in the chain of arteriosclerosis, hypertension and nephritis.

Marked production of atheromatous plaques in the rabbit's aorta may be produced within one hundred days by feeding a diet high in cholesterol and the daily injection of posterior lobe pituitary extract.—DRS. R. C. MOEHLIG and E. A. OSIUS of Detroit, in *Ann. Intern. Med.*, Dec., 1930.

Blindness and Hearing

Blind persons do not hear better than those who can see; they simply seem to do so because they listen harder.—MRS. W. HATHAWAY, of Natl. Soc. for Prevention of Blindness.

Hematogenous Nervousness

By hematogenous nervousness should be understood the type due to poisons of endogenous as well as of exogenous origin; that is to say, to substances taken into the system as food or medicine, such as coffee,

alcohol, tobacco, lead, opium, belladonna and many of the tar preparations, as well as the toxins generated by the organisms associated with rheumatism, syphilis, diphtheria, the exanthems and other infective conditions. It also includes the toxemias connected with defective excretion.—DR. E. PRITCHARD, in *Practitioner*, Lond., July, 1930.

Deafness of Focal Infection Origin

After the careful study of a large series of cases, the writer has come to the conclusion that the most outstanding cause of deafness of focal infection origin is pathologic conditions in and about the teeth. Dental pathology is responsible for at least 60 percent of the cases seen. The tonsils are the cause in perhaps 15 percent, while all other causes make up the remaining 25 percent.—DR. G. W. MACKENZIE, of Philadelphia, in *Eye, Ear, Nose and Throat Journal*, October, 1930.

The Porges-Pollatschek Skin Test For Pregnancy

In the skin test for pregnancy, devised by Drs. Pollatschek and Porges, of Vienna, 0.2 cc., of the hormone of the anterior lobe of the pituitary is injected intracutaneously. "If the woman is not pregnant, a distinct red circle, about an inch in diameter, is formed after a few hours at the site of the injection and remains visible for 24 to 36 hours. In pregnant women there is no reaction."

In a series of 184 cases, in which this test was checked by the author, the results were neither definite nor reliable.—DR. H. STRAUSS, Brooklyn, in *Am. J. Surg.*, June, 1930.

The Stethoscope

There is a tendency nowadays to attack the stethoscope.

No x-ray film or even fluoroscopic exam-

ination can convey the sense of strength or weakness that is revealed when the trained hand palpates the region of the laboring heart or the stethoscope detects the murmur at apex or base and brings out the character of the closing sounds of aortic and pulmonic valves.

The stethoscope, x-ray and electrocardiograph are allies, not enemies.—DR. J. B. HERRICK, of Chicago, in *Ann. Intern. Med.*, Aug., 1930.

Pseudoperitonitis

Symptoms, so closely simulating those of peritonitis that many operations have been performed, may arise from distant injuries (as to the phrenic or certain thoracic nerves).

If a case lacks some of the signs and symptoms of an acute inflammation, the surgeon should stay with the patient until the case is fully studied. Block anesthesia of the suspected nerve may clear up the diagnosis completely.—DR. FREDERICK S. WETHERELL, in *A. J. of Surg.*, Sept., 1930.

Menstrual Disturbances in Girls

Menstrual disorders in adolescent girls are most commonly due to focal infection, insufficient protein in the diet, and insufficiency of the anterior pituitary hormone. Where this last-named lack is demonstrable, the oral administration of anterior pituitary substance, in sufficient dosage, is helpful.—DR. CHAS. H. LAWRENCE, JR., in *J.A.M.A.*, Oct. 18, 1930.

Careless Diagnoses

The making of positive but unwarranted diagnoses is one of the deadliest sins committed by the medical profession. Ten negative Wassermann reactions cannot be counted on to destroy the harm done by the report of one false positive one.—DR. WALTER C. ALVAREZ, in "Nervous Indigestion."

Syphilitic Arthritis

Not all cases of arthritis in syphilitic patients are of luetic origin. Failure to recognize this fact has led to much confusion.

Seventy (70) percent of arthritis in children is syphilitic.

In cases of hydrarthrosis and joint pain

which are not readily classified, look for syphilis. Bilateral hydrops of the knee is syphilis.—DR. EDWARD S. HATCH, New Orleans, La.

Graves' Disease

The Graves' syndrome is uncommon in races of coarser mental fiber and is common in those of subtler mental reactions and where the strain of existence is keener.

The Graves' syndrome is apparently a social disease of the higher civilizations.

The "Graves constitution" persists after any form of treatment and is profoundly influenced by environment, so that complete and permanent cure is impossible.—DR. ELI MOSCHCOWITZ, in *Arch. Int. Med.*, Oct., 1930.

The Psychology of Gangdom

To understand gang formation, it is necessary to try to understand the individuals who make up the gang. The study of many cases brings out certain reaction types which allow one to generalize without doing violence to the data. If one wishes to know how crime starts, one should try to find out when and why the child began to be discouraged, to lack faith, be cynical, irritable, irascible or impatient. Failures in school play a great role. The later overt acts, like stealing and lying, are complex developments, built on loss of confidence in self and environment. Analysis of such cases shows that frequently there is good evidence to indicate that the attitude of the delinquent at the age of 12 or 15 is a repetition of the attitude aroused by the father-and-mother situation at the age of 2 or 3. DR. L. SEIF, Munich, Germany, in *Arch. Neurol. & Psych.*, Nov., 1930.

Ocular Headache

Over 90 percent of all people are going about with refractive errors of the eyes, either corrected by the use of glasses or uncorrected.

Among the patients who come to the ophthalmologist, headache is nearly always the chief complaint and an error of the refractive index is revealed in almost all.

Of the refractive errors which cause headache, the worst offenders are hypermetropia and astigmatism. Astigmatism, of itself, particularly when of high degree,

often causes severe headache. The headache in these conditions, due to the unconscious efforts to overcome the defects, is nearly always frontal or supraorbital.

Occipital as well as frontal headache should indicate the possibility of a disturbance of the ocular muscle balance.—DR. I. S. TASSMAN, of Philadelphia, in *Med. Times*, August, 1930.

Fracture of the Neck of the Femur

In intracapsular fracture of the neck of the femur, with death of the head, the x-rays will frequently show the dead head as denser than the surrounding live bone, which has atrophied from disuse.—DR. DALLAS B. PHEMISTER, Chicago, Ill.

Colitis

If the patient is never waked at night by the diarrhea it is probably not due to a true colitis.—WALTER C. ALVAREZ, M.D., in "Nervous Indigestion."

Intestinal Allergy

The best way that I have found of detecting the harmful articles of diet is to simplify the experiment and have the patient live for four or five days on only a few foods. I often begin with meat, rice, butter and sugar—foods which seldom cause trouble. If on this diet the symptoms disappear, other foods can then be added one at a time, and all those that give trouble can be eschewed. Splendid results can sometimes be obtained in this way.—WALTER C. ALVAREZ, M.D., in "Nervous Indigestion."

Enteroptosis

Some persons doubtless feel better while wearing a good corset or an abdominal support but this does not convince me that enteroptosis is a disease. The good which these women often derive from a sojourn in a sanitarium is due probably not so much to the fat which they put on as to the rest which they get.

I think I would as willingly ascribe symptoms to a large navel, to a hooked nose, or to flaring ears, as to a mobile cecum or to a redundant sigmoid flexure.—WALTER C. ALVAREZ, M.D., in "Nervous Indigestion."

Systemic Manifestations of Gonorrhea

Gonorrheal arthritis appears, to a greater or less degree, in about 10 percent of those infected with gonorrhea. It is a distinct blood infection, the source of which is usually in the seminal vesicles and to a less degree in the prostate, or, in the female, the cervix uteri.—DR. W. SCOTT PUGH, of New York, in *Urol. & Cutan. Rev.*, Aug., 1930.

Acute Intestinal Obstruction

Of 28 operated cases of acute intestinal obstruction, 43 percent had hernia as an etiologic factor. Thirty-five (35) percent had had a previous laparotomy. Admitting the possibility of another etiologic factor, it is probably safe to assume that the previous surgery has a definite role in most of the 35 percent. In these cases the previous surgery was mainly pelvic. Thirty-nine and one-third (39 1/3) percent of the patients died; the others recovered. In the fatal cases, delay in operation was an important cause of death.—DR. JOHN W. EMHARDT, of Indianapolis, in *J. Indiana St. M. A.*, Aug., 1930.

Peptic Ulcer

In case of doubt it is easy to throw light on the diagnosis by giving the patient food every two hours. If he is immediately relieved he almost certainly has an ulcer, because no other disease of the digestive tract responds so typically to this therapeutic test.—WALTER C. ALVAREZ, M.D., in "Nervous Indigestion."

Psychogenic Factors in Ulcerative Colitis

It is well known that a state of emotion is often accompanied by hypermotility or spasticity of the colon, and probably also by hypersecretion and vasomotor disturbances.

Investigation into the life histories and mental attitudes of a series of 12 patients suffering from bloody diarrheas or ulcerative colitis, revealed a close association in time between the emergence of a difficult psychologic situation and the onset of these symptoms.—DR. C. D. MURRAY, New York, in *Am. J. Med. Sc.*, August, 1930.

Current · Medical · Literature

Technic of the Intravenous Drip

The intravenous drip has proved to be of enormous value in the prophylaxis and management of shock and collapse.

The main points of the details of the technic, as given in *J.A.M.A.*, April 11, 1931, by Drs. H. T. Hyman and S. Hirsfeld, of New York, are:

- The apparatus required includes:
 - 1.—A stand for the infusion reservoir.
 - 2.—A 250 cc. graduated flask, of the arsphenamine type.
 - 3.—Two pieces of rubber tubing, respectively 30 cm. and 150 cm. long.
 - 4.—A connecting tip for needle or cannula.
 - 5.—A rectal drip.
 - 6.—A Hoffman clamp.
 - 7.—An artery clamp.
 - 8.—A 2 cc. and a 5 cc. syringe.
 - 9.—Intravenous needles.
 - 10.—Intravenous needle-cannulas.

The two pieces of rubber tubing are connected by the rectal drip and the free end of the shorter piece is attached to the reservoir. Between the reservoir and the drip is placed the Hoffman clamp. The reservoir and tubing are filled with the solution to be used, the clamp is loosened, and all air bubbles are expelled.

A blood pressure cuff is placed around the arm, and during the introduction of the needle or cannula it is inflated to a point midway between systolic and diastolic pressures. This insures a maximum distention of the vein. If the vein is easily accessible, a large needle is introduced directly; the cuff is then deflated and the infusion started. In any serious emergency, when it is difficult to locate a vein, it is preferable to cut directly down on the vessel. The flow is immediately started, lest clotting occur in the needle or the adjacent segment of the vein. The arm is immobilized by wrapping it in a large pillow, fastened together with safety pins.

All these technical details arranged, the rate of flow is adjusted by the Hoffman clamp so that not more than 50 nor less than 20 (preferably from 30 to 35) drops fall in each minute. The rate of flow is not regulated until all other variables are controlled. Electric pads or hot-water bottles are arranged over the pillow and around the terminal third of the tubing. It is not necessary to heat the supply in the reservoir.

The intravenous drip has been used for as long as eleven days, without interruption and with only occasional adjustments of the Hoffman clamp. At any rate of from 2 to 3 cc. per minute, from 3,000 to 4,000 cc. of fluid is introduced daily.

The set-up may also be used for the introduc-

tion of various drugs, the injection of which must be made slowly, for we have produced "speed shock" with most of the common drugs, including digitalis, caffeine, atropine, strychnine and quinine. After the drug has been introduced, the artery clamp is released and the infusion reinstituted.

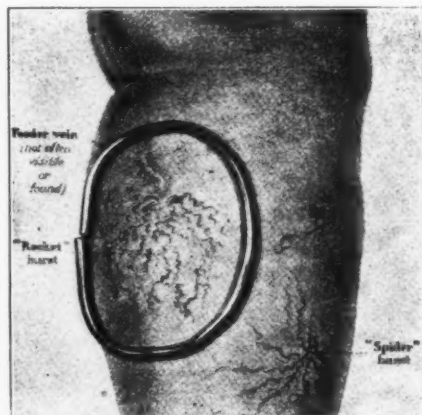


Fig. 1.—Occluder Adapted for Injecting a "Burst".

New Varicose Vein Occluder

In cases of extensive varices with many collaterals, treated by the injection method, the retention and control of the solution is best accomplished by tourniquets. There are some cases, however, especially the "bursts" (see Fig. 1), in which some type of occluder best serves the purpose.

In *J.A.M.A.*, Apr. 4, 1931, Dr. H. O. McPheeters, of Minneapolis, describes a new vein occluder which he has devised. It is made of stout "nickel composition" wire, which is malleable, with the advantage that it can be easily molded to any desired shape or form. Thus it will fit over the tibial crest, the ankle or knee, where other occluders would be of no value.

Pyelonephritis in Pregnancy

From the clinical study of a number of cases of pyelonephritis in pregnancy, Drs. D. K. Rose and P. R. Rollins, of St. Louis, find, as stated in *J.A.M.A.*, Jan. 24, 1931, that proper treatment of residual urine in the bladder can be accomplished only with the aid of a special chart. The St. Louis Maternity Hospital postpartum

urinary chart records the total fluid intake, urinary output and the ratio of the amount of urine voided to the amount retained. These points indicate the type of treatment; that is, a retention urethral catheter, intermittent catheterization or cystoscopic examination and pyelogram and the use of an indwelling ureteral catheter when the bladder function has returned to normal and the symptoms persist. Positional and psychic bladder retention factors must be recognized and treated.

A retention ureteral catheter may occasionally be indicated if the kidney pelvis is known to be of a shape to lend itself to complete drainage, but intermittent ureteral catheterization is rarely indicated and frequently does more harm than good. When there is only the relative obstruction of mild ureteral and pelvic dilatation and neurogenic bladder retention (whether due to injury to the pudendum or to a sympathetic overbalance), continuous bladder drainage is sufficient. It decreases the likelihood of reinfection of the kidney, by diminishing any multiplication of organisms in the bladder, and breaks down the chain of factors that favor transmission of the organism to the pelvis by way of the ascending ureteral lumen, hematogenous or lymphatic routes.

Forcing fluids and urinary antiseptics, locally and by mouth, is of value.

Pyelograms may occasionally be necessary to determine preexisting genitourinary disorder, the degree of ureteral and pelvic dilatation (as an excessive degree may require a retention ureteral catheter) and the type of pelvis suitable for continuous ureteral catheter drainage.

Prognosis depends on the type and extent of the nerve injury suffered during pregnancy or delivery, preexisting genitourinary disorders, the time of onset of the infection and the time elapsing between the onset of an acute inflammatory reaction of the urinary mucosa and the institution of free urinary drainage.

The authors use the following method of fixing the indwelling catheter to the thigh: A 2 by 4 inch strip of zinc oxide adhesive tape, with four half-inch cuts (transverse to the long axis), through which the free end of the catheter is threaded, is fastened to the abducted thigh. Over this another 2 by 4 inch strip of adhesive tape is placed, forming a zinc oxide tube for the catheter and, by being placed on the thigh in abduction, preventing displacement of the eye of the catheter on subsequent abduction.

Clinical Use of Viosterol

From experience gained in the use of viosterol (irradiated ergosterol) in the maternity wards of the Research and Educational Hospital of the University of Illinois, Dr. H. G. Poncher, of Chicago, states in *J. Michigan S. M. A.*, that, in the determination of the prophylactic dose for any given infant, several factors must be given due consideration. If, as in the case of prematures and twins, insufficient mineral deposition in the bones during intrauterine life is a factor, the prophylactic dose should be increased. Rapidly growing infants, whose calcium needs are great, must be given special consideration. Infants with repeated infections and diarrheas also require more than the prophylactic

dose for normal infants. From a consideration of our clinical, roentgenographic and blood chemistry findings we concluded that, for the average normal infant from birth to one year, ten drops of viosterol in oil daily is the minimum dose for prophylaxis if the administration is started within the first month of life.

The determination of the optimum dose for therapeutic purposes was difficult to determine from the small group of active rickets that we had under our observation. The severity of the rickets must be determined, and the dose given accordingly. Mild rickets will frequently heal on fifteen to twenty drops a day, while some severe cases will require as much as thirty to forty drops a day. Given a specific and active form of biologic therapy, results depend to a great extent upon the judgment of the physician.

The last statement at once suggests the question as to what is the limit of safety in the therapeutic scale. We fed some of our infants from twenty-one to fifty-two times the prophylactic dose daily over a period of eight months; without evidence of hypercalcemia, diarrhea or loss of weight. While such doses are not advised, and are seldom indicated, it does emphasize the limit of therapeutic safety. We have no logical reason to believe that doses in these amounts will result in pathologic changes in the tissues. As was emphasized in the beginning of this discussion, the toxic changes reported by earlier investigators were obtained on enormous overdoses. These considerations belong in the realm of toxicology and are not concerned with doses employed for clinical purposes.

The ultimate success of irradiated ergosterol in prophylaxis and therapy must await further carefully controlled clinical use. Introduction of this substance into clinical medicine has given us an excellent and potent source of vitamin D, which, intelligently used, fulfills all our requirements for this form of biologic therapy, and is a noteworthy contribution to the field of medicine.

Treatment of Hallux Valgus

In *Am. J. Surg.*, Jan., 1931, Dr. J. M. Hess, of Columbus, O., describes his method of treating hallux valgus, which has for its purpose:

- 1.—To correct tendon imbalance;
 - 2.—To overcome joint buckling;
 - 3.—To strengthen phylogenetic weakness;
 - 4.—To place the metatarsal head on its base;
- and
- 5.—To relieve excess load on the great toe joint.

There is no set orthodox technic that will meet the various complex situations met in the many varieties of bunions.

To correct tendon imbalance, abductor tenotomy is always done. Transplanting of the abductor tendon is done, without tenotomy, pulling it up to the normal mesial position and suturing it to the periosteum of the great metatarsal bone. The mesial side of the metatarsal head is denuded, thereby removing the osteophytic bone and furnishing a bed for the re-location of the abductor tendon. Advantage is taken of the postoperative joint infiltration, which firmly anchors abductor to joint capsule and bone by a firm fibrous mass. This also overcomes the

phylogenetic and shoe-acquired abductor weakness and restores joint action without buckling.

In order to produce this restoration of tendon balance, other secondary procedures will have to be resorted to, according to the conditions presented by the type of case at hand. Intermetatarsal resistance, produced by tissue changes from the chronic nature of the deformity, must be overcome, so lateral capsulotomy may be necessary. Often interphalangeal fasciotomy and skin lengthening are done. The malposition of the outer portion of the *flexor brevis hallucis* may require tenotomy or lateral sesamoidectomy. *Extensor brevis hallucis* tenotomy may help, due to the angular pull of this muscle.

Restoration of joint alignment may be prohibited by an obstructing joint-lipping on the mesial side of distal end of great metatarsal, which must be removed with the other osteophytic bone.

The closure involves mesial elliptical capsulotomy, which not only removes the proliferating cartilage, but takes up capsular slack and strengthens the position of the imbedded abductor hallucis tendon.

8.—Destructive diseases of bone and joints, such as cancer, sarcoma, teratoma and Charcot joints, demand amputation.

9.—Deformities, such as severe club foot (Wilson).

The junction of the lower and middle thirds is the site of choice in forearm amputations, from the viewpoint of prosthesis and maximum functional value. In the lower limb, the best amputation site is at the junction of the upper and middle thirds, with ample skin flaps.

Copper Treatment of Anemia in Nursling's

The experiments of Steenbock and his associates proved the importance of copper in the alimentary anemia of nurslings.

Clinical tests, as shown in the accompanying table, in four typical cases, suggested that the improvement of the blood picture under copper treatment is so rapid that it cannot but be due to this therapy.

BLOOD PICTURE BEFORE THE TREATMENT

Case	Age	Beginning of disease	Diagnosis	Hemoglobin	Erythrocytes	Reticulocytes	Refraction
1.....	6 weeks	4 weeks	Erythrodermia	58%	2,500,000	40:1000	5% alb.
2.....	2 months	4 weeks	Erythrodermia	60%	2,600,000	34:1000	
3.....	2 months	3½ weeks	Pylorospasm	70%	2,500,000	24:1000	
4.....	3 months		Most severe visceral lues	60%	2,800,000	19:1000	

Some Principles of Amputation

In Illinois M. J., Jan., 1931, Dr. S. J. Governale, of Chicago, gives some guiding principles for amputations:

1.—The aim in any amputation is chiefly to save life and provide for a suitable artificial support.

2.—Compound fracture and dislocation commonly necessitate amputation; especially so where there is much comminution or destruction of bone in the lower extremity.

3.—Amputation is always imperative when there is a great laceration or mangling of soft tissues, with extensive loss of skin and extensive comminution of bone, together with rupture of the main vessel to the extremity. Compound fracture about the knee joint may often call for an amputation.

4.—Avulsion of an extremity, in whole or in part, demands amputation at a higher level.

5.—Lacerated and contused wounds with extensive comminution of bone may demand amputation.

6.—Traumatic popliteal and axillary aneurism, which cannot be resected and properly anastomosed, may necessitate amputation.

7.—Gangrene of extremities from various causes demands, sooner or later, an amputation high up above the popliteal vessel, or a Gritti-Stokes operation.

BLOOD PICTURE AFTER THE TREATMENT

(20 drops of a 1 percent copper sulphate solution; that is, about 5 mg. of copper a day.)

Case	Hemoglobin	Erythrocytes	Reticulocytes	Refraction
1.....	68%	4,800,000	19:1000	6.1% alb.
2.....	75%	3,800,000	2:1000	
3.....	85%	5,000,000	6:1000	
4.....	70%	4,000,000	6:1000	

—DRS. E. SCHIFF, H. ELIASBERG and N. JOFFE
in Klin. Wchnschr., Nov. 15, 1930.

Pernocton as an Hypnotic and Anesthetic

In *Anesth. & Analg.*, Jan.-Feb., 1931, Dr. B. Friedlander, of Detroit, draws attention to the therapeutic applications for pernocton (the sodium salt of the secondary butyl-B-bromallyl barbituric acid).

Pernocton should never be administered in doses great enough to abolish the reflexes. In major operations, it should be used as an extreme hypnotic for induction, and combined with a small amount of ether.

Pernoxon may be used effectively as the sole anesthetic for painful examinations, minor surgical operations, and in many obstetrical procedures.

The author presents seven hundred cases in which pernocton has been used without a single fatality, conditions of extreme excitability being present in only four cases.

Prepatellar Bursitis ("Housemaid's Knee")

From a study of 27 consecutive cases of prepatellar bursitis, with follow-up results, Dr. Louis Carp, of New York, arrives at these conclusions, as given in *Surg., Gynec. & Obst.*, Jan., 1931:

1.—Twenty-seven (27) consecutive acute or chronic cases of prepatellar bursitis ("housemaid's knee") were studied, to determine the end-results of conservative therapy. This consisted in aspiration of the fluid, injection of several cubic centimeters of half-strength tincture of iodine into the sac, vigorous massage over the bursa, reinforced adhesive strapping over the sac with the knee in complete extension, and the application of a firm pressure bandage over the knee.

2.—The cases were preponderant in housewives.

3.—About 65 percent of the patients gave a history of trauma.

4.—About one-third of the cases complained of pain.

5.—Swelling of the bursa appeared, either immediately after the trauma or after days, weeks or months.

6.—The character of the aspirated fluid depended on the length of time it took for accumulation. In the early cases it was bloody; in the later cases, amber or straw-colored.

7.—Aerobic and anaerobic cultures in 11 cases were sterile.

8.—In a little more than half the cases, small amounts of fluid reaccumulated in an average time of 10 days. Aspiration of this fluid was employed. A second injection of tincture of iodine in these cases was usually not necessary.

9.—An average followup of 16 months, in 24 out of the 27 cases, showed no symptoms or reappearance of bursal fluid. In 20 of the 24 follow-up cases, the average time for complete disappearance of the fluid was about 3 weeks.

Indications for the Simple Mastoid Operation

Regarding indications for the simple mastoid operation, Dr. I. Muskat, of Chicago, in *Illinois M. J.*, Jan., 1931, states that it is called for under conditions where:

1.—Abscesses of the soft tissues arise after breaking through the bone or when an intracranial complication arises in the course of an acute suppurative middle ear infection.

2.—Facial paralysis is a relative indication for a simple mastoid operation, depending upon the course of the middle ear suppuration per se, but becomes absolute when bone necrosis is evident.

3.—The persistence or increase of pyrexia, leukocytosis, pain and headache, decreased hear-

ing and discharge, after local drainage and general treatment has been instituted.

4.—Middle ear suppuration, complicated by diabetes and those due to Friedlander's bacillus, in which profuse discharge, corroborated by x-ray findings, indicates antral and mastoid cell involvement.

5.—In infants when a condition of marasmus is due to middle ear and antral disease.

6.—In order to avoid chronicity in cases of acute middle ear suppuration which show no evident improvement after six weeks of meatal treatment and when the removal of adenoids and tonsils produces no immediate improvement.

7.—Cases in which a severe, acute middle ear suppuration involves the only good ear of a patient.

8.—Both mastoids are operated upon at the same time in a bilateral acute otitis media when, under good local and general treatment, one ear develops a mastoid involvement, or when an arising complication does not point to one or the other ear.

Head Injuries of Moderate Degree

In *Northwest Med.*, Jan., 1931, Dr. G. W. Swift, of Seattle, discusses, on the basis of 100 observed cases, head injuries which, though obviously not very severe, yet leave the individuals unable to adjust themselves to conditions and permit them to become claimants for compensation.

The composite picture of such a patient is that of a man of about 42 years old, who several months before suffered an injury to the head, causing such symptoms as severe headache, dizziness, general weakness, disturbances in hearing and vision, loss of memory and localized pain, but who presented practically no neurologic findings except increased reflexes and passive congestion of the vessels of the retina.

The history and physical examination of these patients do not give much definite information. The ventricular study is more accurate and gives positive findings.

In 50 of the 100 cases, ventriculographic examinations were done. The average cerebrospinal fluid pressure was 28.5 mm. of mercury; the average cell count was 4; the sugar content averaged 59 milligrams. In 26 percent of the cases, air showed over the cortex. Only 25 to 40 cc. of air were injected, but if 100 cc. of air had been used any marked degree of cerebral atrophy could easily have been demonstrated.

The author thinks that ventricular studies will enable the medical profession to give better treatment at the very beginning of the injury and that it will do away with many actual disabilities and claims for excessive compensation.

Physiologic Reconstruction of Thumb

A finger with its volar nerves cut is permanently anesthetic. In finger-grafting operations, unless the natural nerve supply is grafted with a digit or the two volar nerves of the new digit are sutured to those at the base of the lost digit, the proper degree of sensation and trophic influence will not be acquired and the grafted digit will to a great extent be physiologically useless.

In *Surg. Gynec. & Obstet.*, Feb., 1931, Dr. S.

Bunnell, of San Francisco, describes a technic for the reconstruction of the thumb, in which the normal nerve and vascular supply are preserved and all of the muscles and tendons of the old thumb are attached in their former arrangement to the new thumb. In the cases reported the new thumb had good physiologic function.

Sodium Thiosulphate in Mercuric Chloride Poisoning

In *J.A.M.A.*, Feb. 21, 1931, Drs. H. E. Marchbanks, C. H. Smith and H. L. Church, of Pittsburgh, Kans., report a case in which a woman had ingested 75 grains (5 Gm.) of mercuric chloride about 22 hours before being seen. She had retained the poison about 20 minutes before she vomited, and 30 minutes before she had an emetic.

Fifty (50) cubic centimeters of sodium thiosulphate, in five doses of 10 cc. each, intravenously, every 8 hours, seemed to have neutralized the mercury and saved the patient's life.

Six months later the patient had normal kidney function.

The case is remarkable on account of the massive dose taken and its long retention.

Prognosis of Cutaneous Burns and Scalds

The seriousness of cutaneous burns and scalds depends on the extent, depth and location of the injury.

In *Am. J. Surg.*, Feb., 1931, Dr. S. G. Berkow, of Perth Amboy, N. J., points out that, for purposes of record, comparison and prognosis, a definite, numerical statement of the relative amount of surface area burned is essential.

The surface-area proportions have proved their clinical value for this purpose.

If the amount of body surface is determined from the patient's height and weight by the height-weight formula of du Bois or from a table or nomograph based on this formula, the estimated percent of involvement can be used to determine the actual area burned. This may be important in prognosing the healing time. The prognosis as to life depends upon the percent of unburned and functioning surface that remains. This is found by subtracting the estimated percent of burn from 100.

Infections of the Distal Phalanx of Fingers

In *Am. J. Surg.*, Feb., 1931, Drs. H. Berman and M. I. Strahl, of Brooklyn, remark that minor injuries frequently cause the amputation of fingers for gangrene, because of neglect or mis-handling.

These authors remark that infections of the distal phalanx, undergoing necrosis with complete destruction of the diaphysis and even as much as seven-eighths of the epiphysis involved, will have a tendency to go on to complete bone restoration of the phalanx, if suitable drainage is instituted and sequestra removed.

The removal of sequestra hastens restoration; the non-removal will cause delay in waiting for them to be discharged from the wound, and may destroy neighboring healthy tissue.

The diaphysis bears the brunt of the necrosis, being within the upper four-fifths of the phalanx (closed space) while the epiphysis, which is in the lower one-fifth, does not, being outside the closed space.

A horseshoe incision at tip of finger, not extending below the upper four-fifths of the phalanx, is the incision of choice.

Necrosis, in a mild case, does not necessarily call for curetting for improvement.

While the receding of the flaps made by the horseshoe shaped incision may dwarf the growth of the phalanx, sufficient packing will prohibit this.

Preventive Vaccination Against Undulant Fever

Undulant (Malta) fever is transmitted to man from infected domestic animals with which he comes in contact. In *Ann. de l'Inst. Pasteur*, Nov., 1930, Drs. C. Dubois and N. Sollier report that they have vaccinated 111 persons exposed to such conditions with a vaccine composed of 3 strains of *Brucella melitensis* and 2 strains of *Brucella abortus* of animal origin. Three injections, 0.25, 0.75 and 1 cc. respectively, of the vaccine were made, at intervals of 8 to 10 days. There is only a slight reaction at the site of injection. None of the vaccinated persons contracted undulant fever during the period of observation from 3 to 8 months. Two out of 36 non-vaccinated controls contracted fever during the same period.

Should Doctors Advertize?

In *Med. Economics*, May, 1931, E. E. Calkins discusses professional advertizing by physicians.

The first requisite for the profitable practice of medicine is an enlightened public opinion.

It is difficult, perhaps impossible, for a doctor in a printed public notice, or in any other way, to ask for patronage. But if he and his associates can, by uniting, use advertizing to create a better state of mind toward doctors in general and toward the practice of medicine, teach people how to discriminate between reliable and unreliable practitioners, and especially encourage them to make fuller and better use of the doctor's services, then such a plan is worth considering.

The initial effort should be a collective one. Doctors can say, as a body, many things they cannot yet say as individuals.

If enough local associations initiate such a movement and persist in it until its results begin to show, it will be merely a matter of organization to make it national in scope.

Such work should be a stepping stone to the ethical advertizing of individual physicians. The public mind would be prepared for such an innovation, and the hesitance and prejudice inside the profession would be worn down, so that, in time, a doctor could announce in the newspapers that he had commenced to practice in a

community, what his hours were, that he was a member of the association and contributor to the cooperative fund. He would describe the kind of practice he aspired to, whether general or special, give something of his experience, school, hospital, etc., all done in simple, direct, disarming language, which would carry weight by its sincerity and conviction. But the time for this is not yet. There is a big job of publicity for the medical profession to do in setting the public right on its whole relation to the doctors in the community.

Extraction of Children's Teeth

The normal biologic and physiologic processes for the teeth and jaw should not be disturbed, constitutionally or locally. However, nature should be aided whenever and wherever necessary.

The extraction of the permanent teeth of the child, not only mutilates the dental apparatus within itself beyond repair, but in addition to this, to a greater or lesser degree, throws the developmental scheme of nature out of plumb. The extraction of several teeth may disturb the developmental forces to such an extent as to cause deviation of the nasal septum and asymmetric development of the entire maxillary structures. The extraction of the first permanent molar tooth of a child is about the greatest crime which may be committed upon the dental equipment of a youngster. The extraction of deciduous teeth, when provision is not made for space retention, will cause great havoc and will result in malocclusion in 90 percent of the cases.—LAWRENCE KURLAND, D.D.S., in *Dental Outlook*, March, 1931.

Combating "Hunger Strike" in Children

In 110 cases of anorexia reported upon by Drs. W. P. Lucas and H. B. Pryor, of San Francisco, in *Am. J. Dis. Child.*, Feb., 1931, these authors found good results in "hunger striking" children, after from six weeks to three months, on diets of low residue, low fat and high vitamin content, or on diets of low fat, low starch and high vitamin content, combined with a regimen of rest and any special therapy indicated.

Body measurements established the fact that 82 percent of the 110 children complaining of anorexia had the linear type of build.

Obstinate constipation had a high correlation with poor nutrition in the linear type in this series.

Fatigue and irritability were characteristic of the most poorly nourished children.

High rates of basal metabolism accompany and possibly explain the nervous type of overactivity noted in many children of the linear type.

Diets high in fat content, commonly fed to underweight children, are contraindicated for subjects of the linear type.

The substitution of one quart of fruit juices for the one quart of milk a day usually prescribed, has a stimulating effect on the appetite.

A diet of low residue successfully combats

persistent constipation associated with mild distention of the colon.

Ambulatory Treatment of Chronic Gastric Ulcer

For patients who cannot or will not take complete rest in bed during at least a part of the medical treatment of chronic gastric ulcer, the following treatment, as described by Dr. N. Hypher, in *Practitioner*, Feb., 1931, has given most satisfactory results:

During the first week the patient is put on a bread and milk diet and given the following mixture:

Bismuth carb	.....grs. xv	1.00
Mag. carb. lev	.....grs. xv	1.00
Calc. carb.	.....grs. xv	1.00
Emuls. chlorof.	.....m. x	0.65
Mucil. tragacanth	.....q.s.	
Aq. ad	.....3ss or ʒi	2.0 or 4.0

To be taken with water every four hours (half an hour after meals). When the pain is abolished, the mixture is to be taken 4 times a day; at the end of a month, three times a day. The diet is gradually modified, week by week, by the addition of eggs, fish, custard, meat and cereals until, after a month, the patient is on a normal diet.

The object of keeping the insoluble alkaline salts in the tragacanth suspension is to bring them into contact with the ulcer, even while patient is standing in the erect position.

New York Academy of Medicine On Birth Control

The New York Academy of Medicine adopted the following Recommendations in April, 1930, and published them in April, 1931, in its *Bulletin*:

1.—The New York Academy of Medicine, as a medical organization, should be concerned solely with the medical and public health aspects of birth control, and not with its economic considerations.

2.—The contraceptive clinics already in existence in the various hospitals, and operating within the law solely in the interest of the health of the individual, should be continued, and all institutions in which this service is required should organize similar clinics as integral parts of dispensary and hospital service.

3.—All extra-mural clinics, when their existence is temporarily justified, should have a medical personnel of competent physicians with special training in gynecology; the clinics should secure the services of local gynecologists and obstetricians of recognized standing and authority to serve in an advisory capacity and to formulate and enforce suitable rules and regulations concerning the medical indications for the giving of contraceptive advice and to make regular inspections to see that these rules are observed. Efforts should likewise be made on the part of these extra-mural clinics to obtain the services of experienced physicians in the several branches of medicine to aid the staff in the diagnosis and conduct of the more difficult cases. The extra-mural clinics, if so safeguarded and supervised,

should receive the support of the medical profession only until a sufficient number of hospital clinics has been developed to meet the public health demand.

4.—A movement should be begun to include, in the curriculum of medical schools, instruction in modern contraceptive measures and in the indications therefor. The hospital clinics should likewise be asked to offer similar instruction to practicing physicians.—*Birth Control Review*, May, 1931.

Circulatory Diseases and Abdominal Conditions

From a number of cases coming under the writer's observation complaining of abdominal symptomatology, in which the causative lesion was found elsewhere, it has been concluded that three common causes have been misinterpreted. They have been, in their order of frequency, as follows: Myocardial insufficiency, coronary disease and changes in the cardiac mechanism. One or more of these diseases have been found so frequently in patients complaining of abdominal symptoms that cardiac study has been made a routine part of the examination in all of these patients.

In acute coronary disease, the attack stimulates the "acute surgical abdomen," in which the attacks are fulminating in character and the pain is almost entirely limited to the upper abdomen, at least during the first few hours. Vomiting is a common symptom; there is rigidity of the abdominal muscles; a mass may be felt in the upper abdomen; jaundice may or may not be present; tenderness is usually limited to the right upper quadrant; fever and leukocytosis occur.

In myocardial insufficiency, the masquerade is often that of gaseous distension, loss of appetite, fullness and oppression after meals, a sense of weight in the epigastrium, nausea, vomiting and, at times, jaundice.—DR. W. W. BEAUCHAMP, Lima, O., in *Ohio St. M. J.*, March, 1931.

Present Status of Medico-Dental Relations

In *Bull. Florida St. Dent. Assn.*, Feb., 1931, J. H. Klock, A.B., D.D.S., of Orlando, Fla., expresses his opinion that to remedy most of the criticisms which are directed at the dentist by the physician, certain changes must be made in the system of dental education:

1.—The dental student, although trained in basic medicine, is not inspired with the importance of these studies in the practice of modern dentistry. Even the instructors do not enforce the rigid requirements of purely medical subjects upon the dental student.

2.—Physical diagnosis and the use of the stethoscope in ward work should be an important part of the dental course. When dentists are thoroughly familiar with the use of the stethoscope, much trouble which is now experienced with general anesthetics will be obviated.

3.—There should be more exchange of professors and teachers from one school to another. In this way, various opinions could be diffused and tolerated, with greater progress to the dental profession forthcoming.

4.—The cultural qualifications to study dentistry should be on a par with those of medicine.

5.—The universities should decide on a uniformity of the dental degrees.

6.—To remedy the present injustices and invasions of the dental field by the physician, the best method will probably be by education and more intimate social relations.

7.—In every hospital supported by public funds, ethical dentists should be as eligible as physicians are for staff appointments. They should attend staff meetings regularly and should enter into discussions.

8.—There should be a medico-dental society in each community, where the ideas of both professions can be scientifically exchanged.

The Positive Wassermann Reaction in Gynecologic Surgery

Based on the statistical information obtained from seven years observation in the gynecologic service of Dr. B. M. Anspach, at the Jefferson Medical College Hospital, Philadelphia, Dr. L. C. Scheffey arrives at a number of conclusions, as given in *J.A.M.A.*, Jan. 24, 1931, from which the following are taken:

A routine Wassermann test should be made on all patients admitted to a gynecologic or general surgical service. A positive Wassermann reaction is a helpful indication of the presence of some type of syphilitic infection and may point to dangerous tissue damage in the organism itself. The incidence in the entire series was 7.6 percent.

The incidence of syphilis in the operative cases, as indicated by the positive Wassermann reaction, was 8.6 percent. None of the patients exhibited primary or secondary manifestations of the disease and no diagnostic operative errors were made by reason of its presence, which emphasizes the desirability of this routine study.

Preoperative complications, especially of the cardiovascular and nervous systems, are more likely to be present in patients exhibiting positive Wassermann reactions.

Postoperative wound healing was somewhat better in the negative Wassermann group.

Of practical importance to the surgeon is the average number of postoperative hospital days, which showed practically no difference in the two groups or between the treated and the untreated syphilitic cases. This finding is worthy of emphasis and suggests that the convalescent period, either in uncomplicated or in complicated cases, is not prolonged by syphilitic infection as manifested by the positive Wassermann reaction.

The mortality appears definitely higher in the positive Wassermann group.

Treatment prior to operation should not be indiscriminately advised or given as a matter of routine, simply because the patient has a positive Wassermann reaction. Each case should be considered individually, the therapy employed being dependent on the amount of damage to the organism as a whole and not merely on the presence of syphilis. The cooperation of the syphilologist is desirable, helpful and advisable.

The patient with syphilis, as indicated by a positive Wassermann reaction and studied in a gynecologic service, is not a greater risk merely

because of the syphilitic infection. It is the amount of damage to the organism as a whole that is the vital factor concerned in evaluating that risk. Furthermore, diagnostic errors can be avoided by thinking of syphilis in the light of its widespread manifestations.

Undulant Fever

A clinical study of undulant fever is presented by Dr. W. M. Simpson, of Dayton, in *Ohio St. M. J.*, Jan., 1931. The disease is apparently being much more commonly observed in the United States. In 1927 there is record of but 198 cases, occurring in 8 States; during 1929 every State reported cases, amounting to a total of 1301.

Although it has usually been considered that human infections result from the ingestion of the *Brucella abortus* of cattle or swine, yet it has been demonstrated experimentally that the skin also may act as a portal of entry.

One of the most marked characteristics is the nocturnal exacerbations of fever, with drenching sweats sometimes accompanied with anxiety, delirium and insomnia. There is almost always a loss of weight. Abdominal pain is present in a fair proportion of the cases.

In a series of 103 cases investigated by Dr. Simpson, 5 of the women patients gave a history of repeated abortions.

Leukocytosis is uncommon, but leukopenia is the rule.

If a clinical diagnosis of undulant fever is arrived at, there are four confirmatory procedures: recovery of the organism; animal inoculation; the agglutination test; the skin test.

The agglutination reaction is the simplest confirmatory test. Dried blood specimens are unsuitable for this test. Antiabortus agglutinins usually appear during the second week of the illness. Ordinarily, agglutination will occur in dilutions of 1:160 to 1:1280 or higher, during the third or fourth week of the disease, but it is important to remember that certain individuals with well-established clinical manifestations of *Brucella abortus* disease and from whose blood the organism may be recovered may fail to show *Brucella abortus* serum agglutinins. The skin test may be important in such cases. Strongly positive skin tests may be obtained after the intradermal injection of one-tenth of 1 cc. of a saline suspension of heat-killed abortus organisms, adjusted to a standard of two billion organisms per cc.

The author has obtained good results in definite cases from the use of a vaccine made of heat-killed organisms, standardized as stated.

Vitamin B in Diets of Infants

But few clinical reports regarding vitamin B deficiency in infants have been reported. In *J.A.M.A.*, Feb. 28, 1931, Dr. B. R. Hoobler, of Detroit, reports on 125 infants observed over a period of 5 months in the nursery wards of the Florence Crittenden Hospital, Detroit. Vitamin B is considered only from its antineuritic aspects.

The author states that it is his conviction that our infants are menaced by a partial lack of vitamin B, rather than by a complete deficiency. The

former condition is much more difficult to diagnose than is outspoken beri-beri, and the signs may range all the way from fretfulness and anorexia to noticeable loss of weight and rigidity.

It was observed, in the 125 cases studied, that wheat germ and yeast, in the form of dried, powdered watery extracts, when added in the proportions of 1 Gm. of wheat germ extract and 0.5 Gm. of yeast extract to 1 ounce of a preparation of maltose and dextrin and fed to infants, caused no appreciable gain in weight over controls who were fed on similar formulas without vitamin B additions.

Infants given vitamin B additions showed a greater growth in recumbent and stem length than controls not given the vitamin B additions.

About one out of six of the infants studied showed symptoms of rigidity. This symptom disappeared in all but six of the cases, indicating that the quantity of vitamin B needed by infants differs greatly, and that one should bear in mind that, while the amount of vitamin B in the commercial carbohydrate preparations may be sufficient for certain infants, there are others who will require larger quantities.

Dr. Hoobler points to many reports in the literature which assert the necessity of supplementing the administration of vitamins A and D (in the form of cod-liver oil and viosterol) with the proper proportion of vitamin B.

Injection Treatment of Inguinal Hernia

Dr. R. Wolfe, of Brooklyn, N. Y., in *M. J. & Record*, March 4, 1931, reports that he has used the injection method of Piña Mestre in 22 cases of indirect inguinal hernia, all but 1 in males. The number of injections varied from 2 to 19. All cases were ambulatory. Of the 22 cases there were satisfactory results in 19. There was neither morbidity nor mortality in over 250 injections. Only one patient took to bed, and this but for one day.

The author is of the opinion that the injection method of treating indirect inguinal hernia is worthy of further investigation, and that it should be considered in cases of poor surgical risk, old age, or a non-election of surgery.

The Psychic Value of Color in Pediatrics

In *M. J. & Record*, March 4 and April 1, Dr. Geo. D. Scott, of New York, discusses the psychic value of music and color in pediatrics.

Regarding color, Dr. Scott remarks, that a great deal of incredulity may be found in the ranks of pediatricists as to the value of color on nutrition. This is rather an unfortunate attitude to take. At some time or another every pediatricist, consciously or unconsciously, if he be a close observer, has had enough clinical experience to warrant him, at least, in believing in the value of color on the child's disposition, even if he fails to see any such impression on its nutrition.

A physician while calling on a patient heard the persistent crying of a two year old child in a neighboring room. When the child was playing in that room the crying rarely ceased, but when removed to another place quietness reigned.

Investigating, the child was found to be playing on a highly colored crimson floor rug. Upon substituting a green one the child ceased crying and played happily with its toys. Many a bright orange or crimson covering in a perambulator has been exchanged for a cooler color with marked improvement in bottle feeding and in mood; while the appetite and nutrition, of many spoiled and emotionally unbalanced children in particular, have been markedly stimulated through the substitution of cooler-colored tableware from the white plates, cups and saucers, possibly decorated with highly colored and highly imaginative red poppies or other equally excitant color figures, formerly used. In such cases, olive-green dishes, in the experience of the writer, have proven of great service. Toys, flowers, furniture, ornaments and bric-a-brac in the nursery and playroom, as well as carefully selected colors for the child's clothing, etc., all possessing attractive colorings, and in general all harmonizing with each other, are a welcome addition to any home, to any playroom.

Bacteriology of the Fauical Tonsil

The percentages of the various organisms found in the examination of 19,461 tonsils are shown in the following table:

Vincent's organisms	8.4%
Staphylococcus aureus	33.4%
Staphylococcus albus	3.5%
Staphylococcus citreus	0.7%
Streptococcus viridans	24.8%
Streptococcus hemolyticus	6.7%
Streptococcus non-hemolyticus	6.0%
Mucosus capsulatus	2.4%
Pneumococcus	3.3%
Diphtheroids	1.4%
M. catarrhalis	10.0%
Leptothrix	0.14%

—DR. R. H. FRASER and associates, of Battle Creek, Mich. in *Arch. Phys. Therap. X-Ray*, Radium, Jan., 1931.

Respiratory Diseases and the Teeth

Based on the study of 100 consecutive office patients, suffering from various respiratory disorders, Dr. Wm. Lintz, of Brooklyn, in *M. J. & Record*, Jan. 21, 1931, reaches the following conclusions:

- 1.—Focal dental infections cause respiratory diseases, not by means of aspiration, but through the circulation.
- 2.—Bacterial sensitization from dental infection and autogenous vaccine immunization plays an important role in respiratory allergy.
- 3.—Rontgenologic examination is necessary absolutely to exclude dental infection, irrespective of the appearance of the teeth.
- 4.—Every missing tooth, before it is lost, is an infected tooth and becomes a potential factor for systemic infection and sensitization.
- 5.—Eradication of focal dental infection and autogenous vaccine immunization are of great benefit in tuberculosis.
- 6.—Immunization prior to dental extraction will avoid aggravation of symptoms.
- 7.—The teeth are not lost haphazardly, but in a definite order.

8.—Fifteen percent more teeth were lost in the upper than in the lower jaw.

9.—One hundred office patients suffering from respiratory diseases lost twenty-nine percent of their teeth, as compared with seventeen percent lost by one hundred normal people and thirty-two percent lost by three hundred and forty-nine patients suffering from disease in general.

Psychotherapy in a Gynecologic Service

In the Mount Sinai Hospital, New York, an attempt has been made to discover psychogenetic factors associated with gynecologic functional diseases for which no satisfactory physical basis could be found. The objects were to differentiate between organic and psychogenic determinants and to treat both. In this way psychotics and psychoneurotics could be weeded out, operative measures limited and suggestive psychotherapy applied to functional disorders.

In *Am. J. Obstet. & Gynec.*, Mar., 1931, Dr. Max D. Mayer, of New York, states that this policy has helped to limit and to clarify operative indications; that it has stimulated men in contact with the work in the direction of a new view point; it has given those who have spent time in the investigation ample reward in the increased understanding of their patients, and increased tolerance of their oddities and an increased respect for the complexity of the whole psychophysical apparatus.

Standard Treatment for Early Syphilis

In *Am. J. Syphilis*, Oct., 1930, Dr. W. R. Houston calls attention to the necessity for a standardized treatment of early syphilis. Such a treatment was published by the United States Public Health Service, in 1929.

In this scheme of treatment, arsphenamine, silver-arsphenamine, neoarsphenamine, bismuth, mercury rubs, and iodide of potash are all used, an option being given as to which form of arsphenamine shall be employed and whether bismuth or mercury shall be used. It is stated, "Bismuth is better than mercury," and is to be used if it is possible. If the easiest alternative is taken, the scheme will read as follows:

On the first, fifth, and tenth day, give 0.9 gm. of neoarsphenamine. Repeat this dose, at weekly intervals, until ten doses are given.

Four doses of bismuth, 0.2 Gm., at weekly intervals, and potassium iodide are given. This will be followed by four courses, each of ten weekly treatments, with 0.9 Gm. neoarsphenamine, there being interposed between each course, bismuth and potassium iodide, the first bismuth course of six weeks, six doses; the next, eight doses; the third, ten doses, the treatments finally ending with ten doses of bismuth.

Cerebrospinal fluid is to be examined routinely at the end of the second course of arsphenamine.

Patients with primary syphilis, who have never had a positive Wassermann test, may stop treatment at the end of the fourth course.

This scheme of treatment would take 88

weeks of uninterrupted management and would close with a second spinal fluid examination. The drugs used would, alone, cost about \$100, without reckoning the cost of their administration.

By following this standard one may expect that four out of five patients will obtain a permanent clinical and serologic cure.

Lachrymal Duct Disease in Infants

Occasionally one sees in the newly-born baby an obstruction of one or both lachrymal ducts. Usually it is one-sided. These cases present a watery eye from the time of birth and the condition is not only a great annoyance to the patients and parents, but a positive source of danger, in that the eye is subjected constantly to infection.

This obstruction of the lachrymal apparatus in the newly-born is due to the accumulation of epithelial debris or the persistence of a membrane at the lower end of the duct, that normally disappears at the time of birth.

Treatment consists, first, in an effort to force tears through the duct by pressing several times a day at the junction of the nose and the eyelid on the affected side. Drainage may be facilitated somewhat by the use of a mild astringent—one-half grain (0.032 Gm.) solution of sulfate of zinc to the ounce, to which a few drops of epinephrin solution have been added. A drop of this lotion can be put in the eye in the hope that it will work into the duct, contract the capillaries and make the passage more patulous. If this simple procedure fails, it is necessary to pass a probe through the lachrymal duct. Usually a single operation is all that is necessary and the condition will clear up as by magic.—Dr. W. R. PARKER in *J. Indiana S. M. A.*, Dec., 1930.

Ocular Symptoms in Head Injuries

According to Dr. E. L. Vernon, of Chicago, in *Internat. J. Med. & Surg.*, Feb., 1931, although the physician may well depend solely upon the grosser symptoms, as pulse, temperature, blood pressure and respiration, in the severer forms of head injury, yet a critical record of the condition of the ocular apparatus is of the utmost importance in evaluating subjective symptoms in a patient who later presents himself with intracranial manifestations not accompanied by clinical symptoms.

Scotoma may be discovered by taking the field of vision and examining the interior of the eye with the ophthalmoscope, whereas it is discoverable in no other manner.

The eye is an organ of great refinement and, by the same token, it is capable of transmitting superfine phenomena in head injuries and skull fractures. Through it, as through no other organ of the body, do we maintain happiness.

Treatment of Painful Breasts with Ovarian Residue

From an experimental and clinical study of "painful breasts," Dr. Max Cutter, of New York, in *J.A.M.A.*, April 11, 1931, states that the pathologic condition underlying "painful breasts" (erroneously termed "chronic mastitis"), arises from a certain type of desquamation of epithelial cells in the ducts and acini, accompanied by hyperplasia of the pericanalicular and periacinous connective tissue. The shed epithelial cells accumulate in and distend the duct and acini, giving rise to diffuse pain and often generalized nodularity of the breast.

The corpus luteum of menstruation and the corpus luteum of pregnancy are responsible for the normal physiologic hypertrophy of the mammary glands. Hyperplasia of the breast elements has been produced experimentally, in animals, by injections of corpus luteum.

Clinical, pathologic and experimental evidence clearly indicates that excessive epithelial and connective tissue hyperplasia, giving rise to diffuse generalized pain and nodularity in the breasts in relation to menstruation, may be due to excessive corpus luteum stimulation.

In patients suffering from "painful breasts," the corpus luteum dominates the ovarian metabolism and, by inducing an excessive epithelial and a connective tissue hyperplasia, causes diffuse pain and generalized nodularity of the breasts. At the same time, the overactive corpus luteum suppresses ovulation and exerts an estrus-inhibiting influence, leading to a hypofunction of the follicular and interstitial elements of the ovary, as indicated by the short and scanty menstrual periods in these cases.

The administration of ovarian residue apparently tends to cause a cessation of abnormal epithelial and connective tissue hyperplasia by counteracting the excessive corpus luteum secretion, thereby diminishing or removing its overstimulating influence on the breast elements.

The effect of ovarian residue on epithelial and connective tissue changes of the breasts is apparently specific and has been successful in a number of clinical cases reported.

Intravenous Use of Liver Extract

In *J.A.M.A.*, April 11, 1931, Drs. W. B. Castle and F. H. Laskey Taylor, of Boston, report that they have succeeded in isolating a fractional liver extract, free from protein and other allergy-producing substances, which is capable of being employed intravenously with only a transitory effect on the blood pressure.

In a clinical case, maximum reticulocytic responses were obtained from a single intravenous injection of the amount of extract derived from 100 Gm. of liver. In another case, success was obtained where previous oral administration had failed.

NEW · BOOKS

Drudgery is as necessary to call out the treasures of mind as harrowing and planting those of the earth.—MARGARET FULLER.

Stockard: Physical Basis of Personality

THE PHYSICAL BASIS OF PERSONALITY. By Charles R. Stockard, Professor of Anatomy and Director of the Anatomical Laboratories and the Experimental Morphology Farm in the Cornell University Medical College. New York: W. W. Norton & Company, Inc., 1931. Price \$3.50.

In this book the author endeavors to give a general conception of our present knowledge concerning the physical determinants of individual personalities. The book is a modification of the author's series of Lane lectures, delivered at Stanford University, California, during the Spring of 1930, the modifications being in reduction of technicalities so as to bring the descriptions within the purview of the ordinary intelligent reader.

In a general way, the subject has been approached by a consideration of what biologic and evolutionary studies, and certain experimental investigations by the author along the line of Mendelian inheritance, have established regarding behavioristic mannerisms as affected by physical conformation.

Of the 16 chapters forming the book, the first five discuss the relation of germ cells and genes to personality. Chapter VI discusses developmental or embryonic personality, including environmental effects. Chapters VII to IX show the effects of various structural changes on the characteristics of the developing embryo and discuss the differences in abilities of different members of the same family and their probable causes.

Chapter X is one of the most interesting and informative, from the point of view of the physician and surgeon. It deals with the effects on developing personality of the transplantation of germ cells of organs and parts. Here are discussed such questions as parasitism, hermaphroditism and the transplantation of organs and parts from one individual to another, with their possible effects on character.

Some interesting experiments are discussed in Chapters XI to XIV, regarding deviations from racial types by cross-mating. It is rather curious to find that, in crosses between the basset hounds and shepherd bitches, the puppies, when put to the field for the first time, will scent with their noses down, behaving as their hound father would do, in a manner entirely unlike the reactions of their shepherd mother, with whom they have always associated and whose body formation they imitate. The hunting instinct is inherited just as truly as leg length

or hair color, and it is not clear how this fits in with the author's thesis that physical conformation determines behavior and character.

The book is an extremely interesting one. The medical man who has not followed the developments of biologic science will find here a summary of many complex and fascinating questions regarding human traits and individual peculiarities of character and behavior. But the reader who thinks may not feel quite satisfied that a mere physical difference of background accounts for the potential characteristic psychic differences between races, families and individuals. As the author shows, within the races of mankind, within different peoples of the same races, even between the individual members of the same families, while general distinguishing characteristics are to be observed, yet there are profound individual differences of character. While, apparently, physical peculiarities may often be a factor in such differences, it does not seem to be proved that they are a deciding factor or even any more than one of a number of possible factors.

Zinsser: Resistance to Infectious Diseases

RESISTANCE TO INFECTIOUS DISEASES: An Exposition Of The Biological Phenomena Underlying The Occurrence Of Infection and The Recovery Of The Animal Body From Infectious Disease, With A Consideration Of The Principles Underlying Specific Diagnosis and Therapeutic Measures. By Hans Zinsser, M.D., Professor of Bacteriology and Immunity, Medical School, Harvard University; Formerly Professor of Bacteriology at The College of Physicians and Surgeons, Columbia University, etc. Fourth Edition, Completely Revised and Reset. New York: The Macmillan Company. 1931. Price \$7.00.

This is the fourth edition of the author's work previously published under the title "Infection and Resistance." The change in title has been considered desirable owing to the increasing developments and importance of immunology.

The author stresses those advances in immunology which have fundamentally modified theories, especially the newer knowledge of bacterial dissociation and the changes of antigenic structure accompanying mutations of form, biologic behavior and virulence.

The subject of antigens receives special consideration, particularly the advances in our knowledge of their chemistry by the introduc-

tion of chemical and physical methods in the evaluation of antigen-antibody reactions. Though an exact knowledge of the chemical structure of either antigens or bacterial products such as toxins has not yet been arrived at, that goal is constantly coming nearer in sight. The knowledge of partial antigens or haptens (such as the carbohydrate fractions of bacterial antigens and the lipid fractions of heterophile antigens), together with the precise studies of Wells and Landsteiner in particular, have made it possible considerably to simplify theoretic conceptions.

The work is divided into two main sections. The first section deals with the general principles of infection and resistance. There are 22 chapters covering bacterial products, natural and other types of immunity, antigens, antitoxins, agglutination, and all other phenomena, such as leukocytosis and phagocytosis, associated with bacterial developments and the natural or acquired forces which combat them.

The second section deals with special problems of immunity; namely, immunity in individual diseases—tuberculosis, syphilis, the fevers, etc. This section has 6 chapters.

The literary style of this important book is excellent. The descriptions are clear and precise and the subject matter is logically presented so that, although the diction is necessarily very technical, it is not difficult for an intelligent reader to follow it. Nevertheless the text is not one for the ordinary reader, but calls for an acquaintance with the general biologic sciences and especially with the activities of microbes, with their role in health and in the infections and with the organic mechanism for their regulation.

Dr. Zinsser's book is a credit to American scholarship and research on this important subject and is worthy to be placed in the same rank as works on the same subject by Bordet and Kolle-Wassermann.

Murray: Treatment of Injury

TREATMENT OF INJURY: By The General Practitioner. By Clay Ray Murray, M.D., F.A.C.S., Assistant Professor of Surgery, College of Physicians and Surgeons, Columbia University; Associate Visiting Surgeon Presbyterian Hospital in The City of New York. With 196 Drawings by the Author. In Two Volumes. New York and London: Harper & Brothers. 1931. Price \$5.00 for 2 volumes.

This work in two volumes is one of the Harper's Medical Monograph series.

Dr. Murray here presents what he terms "the surgery of necessity" and since, in the great majority of instances, patients suffering from injury are first seen by the general practitioner, it is the man in general practice who will most benefit by the book.

The author emphasizes the importance of contusions, which are too often neglected as minor injuries of too little importance; he discusses thoroughly the treatment of burns and naturally, a great deal is said in regard to the treatment of fractures and dislocations.

Industrial surgeons will find much of great value to them here, and the author stresses the necessity of enlisting the services of an

expert when the case demands special skill and equipment beyond the resources of the physician who gives first aid.

Part I, of Vol. I deals with soft-part injuries; Part II deals with fractures, except those of the spine and skull. Part III (volume 2) includes dislocations, except those of the spine; and Part IV covers spinal injuries, skull fractures and intracranial injury.

Any practitioner of medicine will find this a handy desk reference work in case of emergencies. There is a good index.

Foster and Anderson: Child and His Parents

THE YOUNG CHILD AND HIS PARENTS: A Study of One Hundred Cases. By Josephine C. Foster, Associate Professor and Principal of Nursery School, and John E. Anderson, Director Institute of Child Welfare, University of Minnesota. Minneapolis: The University of Minnesota Press. 1930. Price \$2.00.

This is one of a series of volumes published by the Institute of Child Welfare of the University of Minnesota. It gives one hundred histories of cases investigated by the Institute, involving more or less abnormal behavior of children between the ages of two and six years—the preschool age. These records may well serve as a model for taking social and psychic histories.

Reading of these case histories should be of value to parents, to students of child behavior and social problems and to physicians in their capacity of family advisors; and the latter may profitably recommend the book to such of their patients as need this information.

Rukeysr: The Doctor and His Investments

THE DOCTOR AND HIS INVESTMENTS: Financial Policy And Technique for the Physician. By Merryle Stanley Rukeysr, B. Lit., M.A., Financial Editor, Medical Economics and Dental Survey; Financial and Editorial Writer, New York American and Associated Newspapers; Associate in Journalism, Columbia University; Author, "Financial Advice to a Young Man," "The Common Sense of Money and Investments," and "Investments and Speculation." Philadelphia: A. Blakiston's Son & Company, Inc. 1931. Price \$2.50.

Primarily, the problem of the proper investment of savings and the allocation of surplus earnings is the same for the doctor as for the layman. There are, however, secondary considerations, peculiar to a physician's calling, which in his case makes the study of reliable financial advice most desirable. Among these are the fact that a doctor's work keeps him apart from the business world (doctors are notoriously poor business men) and that it is so entirely absorbing that he has not the time to acquaint himself with the many pitfalls and intricacies which beset investors.

Mr. Rukeysr is thoroughly familiar with physicians' financial problems. He lays them

out, diagnoses them and suggests methods, not only of avoiding disaster, but to remedy errors. The steps necessary to lay up a competency at the time needed, as well as to secure protection for oneself and dependents on the way, are discussed in the three parts comprising the book: Investment policy for doctors; fields of investment for doctors; and fitting investments to the doctor's needs. Stocks, bonds, insurance policies and savings accounts are envisaged only as instruments which serve the doctor's ends.

A study of the advice given here will many times repay any doctor who pays the small price of the volume.

Morley: Abdominal Pain

ABDOMINAL PAIN. By John Morley, Ch. M., F.R.C.S., Honorary Assistant Surgeon, Manchester Royal Infirmary; Honorary Consulting Surgeon, Ancoats Hospital; Honorary Surgeon for Children, St. Mary's Hospital, Manchester, etc. With An Introduction By J. S. B. Stopford, M.D., F.R.S., Professor of Anatomy, University of Manchester. New York: William Wood and Company. 1931. Price \$3.50.

The mechanism of transmission of pain impulses from the peritoneum to the periphery and skin is always one that has a fascination for the physician and surgeon and, moreover, has applications of real practical value.

Dr. Morley thinks that McKenzie's theory of referred pain—the viscerosensory and visceromotor reflex theory—is not completely satisfactory. He puts forward and discusses an alternative theory; namely, that the phenomena of deep and superficial tenderness and muscular rigidity of the abdominal wall are in no way concerned with the afferent autonomic system, but are entirely referred from the highly sensitive cerebrospinal nerves of the parietal peritoneum.

Warthin: The Physician of the Dance of Death

THE PHYSICIAN OF THE DANCE OF DEATH; A Historical Study of the Evolution of The Dance of Death Mythus in Art. By Aldred Scott Warthin, Ph.D., M.D., LL.D., Professor of Pathology & Director of the Pathological Laboratories in the University of Michigan, Ann Arbor. With 92 Illustrations. New York: Paul B. Hoeber, Inc. 1931. Price \$7.50.

The fear, horror and inescapableness of death has always been an impelling factor in the conduct of men. In the Christian philosophy, *memento mori* takes the place of the *carpe diem* philosophy of the pagan era. During the Middle Ages, especially, this motive was worked upon to the greatest extent by the church, as a weapon to enforce right living; and, at a period when book learning was greatly limited, it was but natural that it should be impressed upon the mass of the people by visual representations such as church and miracle plays, wall paintings in graveyards and the like. It was thus that there arose, about the thirteenth and fourteenth centuries, those varied graphic representations of death as the leveller of all human distinctions and the common end of man known as "Dances of Death"—the *Danse Macabre*. This type of artis-

tic production apparently originated in France or Spain and spread all over the known world during the following six centuries. The German artist, Holbein, was its most famous delineator.

Dr. Warthin has made the study and collection of the various representations of the Dance of Death a life hobby, and in this beautifully illustrated and really literary book he makes a particular study of the figure of the physician, who was always one of the personages represented in the "Dances."

The book is a reprint of articles which appeared originally in the *Annals of Medical History*; and to the cultured physician who likes to browse along the by-paths of history it will afford grateful pabulum. The printing, binding and general bookwork are such as might be expected in a Hoeber production and, as a piece of craftsmanship, apart from its literary and artistic merit, it will claim a place in the library of the book-lover.

Lees: Venereal Diseases

PRACTICAL METHODS IN THE DIAGNOSIS AND TREATMENT OF VENEREAL DISEASES; for medical practitioners and students. By David Lees, D.S.O., M.A., M.B., D.P.H., F.R.C.S., M.R.C.P. (E.), Surgeon in Charge of Venereal Diseases, The Royal Infirmary, Edinburgh; Surgeon in Charge of Venereal Diseases, Royal Maternity Hospital, Edinburgh; Lecturer and Examiner in Venereal Diseases, The University of Edinburgh, etc. With Introduction by Wm. Robertson, M.D., F.R.C.P., D.P.H., Late Medical Officer of Health, Edinburgh. Second Edition. New York: William Wood & Company. 1931. Price \$5.00.

In this work the author aims to give to the student and the general practitioner of medicine a knowledge of accurate diagnostic methods and sound treatment of venereal diseases.

Although the book is not intended as one of reference, detailed descriptions are given of the technic of the methods of diagnosis and of the technic in administering treatment in the venereal clinic of the Edinburgh Royal Infirmary, of which the author is in charge.

The 17 chapters which make up the volume will give to the general physician all the knowledge of the newer viewpoints of the management of the venereal diseases that he will need for general practice.

Surgical Clinics of North America

THE SURGICAL CLINICS OF NORTH AMERICA. New York Number. Volume 11, Number 3, June, 1931. Philadelphia and London: W. B. Saunders Company. Issued serially one number every other month. Per clinic year (February, 1931 to December, 1931), Paper, \$12.00; Cloth, \$16.00.

The June, 1931, number of the *Surgical Clinics of North America* is devoted to clinical contributions from various clinics in New York City. There are altogether 40 short papers.

A large part of this issue is given to a report of the clinical meeting of the New York Fracture Committee of the American College of Surgeons. There are important contributions by Drs. W. Darrach, F. W. Brancroft, C. L. Scud-

der, Royal Whitman and several others, covering the treatment of fractures in various regions, from which many valuable hints on the latest methods may be obtained; also discussions of the same.

Dr. F. M. Frankfeldt has a paper on newer considerations of the treatment of some common rectal disorders. Dr. W. L. Sneed writes on acute infections of the hip.

This is an excellent number.

Heald: Injuries and Sport

INJURIES AND SPORT; A General Guide For The Practitioner. By C. B. Heald, C.B.E., M.A., M.D. (Cantab.), M.R.C.P. (Lond.), Physician with charge of Electro-therapeutic Department, Royal Free Hospital; Physician to the British Red Cross Clinic for Rheumatism; Consulting Physician in Electrotherapy, Royal Air Force, London and New York: Humphrey Milford, Oxford University Press. 1931. Price \$8.00.

Participants in all outdoor sports and games are liable to more or less varied types of injuries.

This book is intended for the use of the general practitioner, so that when a patient comes to him with pain in the shoulder or elsewhere he may be able to go to the book-shelf and read rapidly the signs and symptoms of an injury in the affected region with the differential diagnosis. Then, having selected the diagnosis, to know whether good results will be likely to follow his own treatment, or whether a surgeon should be consulted; whether the expense of an operation would be justified; whether roentgenograms are essential; and whether treatment with electrical currents can aid or hasten recovery.

The general idea of the author is to facilitate diagnosis from the symptoms and to indicate treatment in each case.

Part I—nine chapters—contains a general survey of pathology, diagnosis and the principles of treatment. Part II—seven chapters—deals with each particular injury systematically and in detail, according to the part of the body in which it is situated.

There are three special appendices and a very complete index.

Buie: Hemorrhoids and Anal Pruritus

PROCTOSCOPIC EXAMINATION AND THE TREATMENT OF HEMORRHOIDS AND ANAL PRURITUS. By Louis A. Buie, B.A., M.D., F.A.C.S., Section on Proctology, The Mayo Clinic, Rochester, Minnesota, and Associate Professor of Surgery, The Mayo Foundation, University of Minnesota. With 72 Illustrations. Philadelphia: W. B. Saunders Company. 1931. Price \$3.50.

Dr. Buie's book is one of the Mayo Clinic Monographs and is offered as a manual on consulting room diagnosis of diseases of the anus and rectum and on the treatment of hemorrhoids as carried out in the Mayo Clinic.

The main purposes of the three parts of this work are: (1) To present the technic of direct examination of the anus, rectum and sigmoid; (2) to outline the treatment of hemorrhoids,

especially hemorrhoidectomy; and (3) to offer new information on the subject of anal pruritus.

The author does not deal with the treatment of fistula, fissure and neoplasms.

The book is suitable for the general practitioner.

Collected Papers of the Mayo Clinic

COLLECTED PAPERS OF THE MAYO CLINIC AND THE MAYO FOUNDATION. Edited by Mrs. Maud H. Mellish-Wilson, Richard M. Hewitt, B.A., M.A., M.D., and Mildred A. Felker, B.S., Volume XXII, 1930. Philadelphia: W. B. Saunders Company. 1931. Price \$13.00 Cloth.

The twenty-second annual volume of *Collected Papers of the Mayo Clinic and the Mayo Foundation* contains 85 full reprints, 30 abridged and 55 comprehensive abstracts of contributions made to medical literature by members of the staffs and published during the year 1930. In addition, the titles of 328 other contributions are given. The papers and abstracts selected for publication here are those which are deemed to be of most clinical interest to the general practitioner.

These annual volumes are looked forward to by many as presenting some of the best contemporary work in the scientific practice of American Medicine and Surgery.

The present volume is quite up to the high standard of those previously issued.

Year Book of American Public Health Association

AMERICAN PUBLIC HEALTH ASSOCIATION YEAR BOOK, 1930-1931. New York: American Public Health Association. 1931. Price \$3.00.

In response to insistent demands to publish important committee reports as soon as practicable after their presentation at the annual meeting, the American Public Health Association decided to publish a year book, of which this is the first.

In this year book are found the committee reports, previously published from time to time, as space permitted, in the *American Journal of Public Health*; also information regarding the organization and other activities of the association, with a list of members, etc.

This volume should be a useful reference manual for every public health worker, as well as to the fellows and members of the association who desire more than a casual knowledge of its work.

Emslie: Breast-Feeding

BREAST-FEEDING. By Margaret Emslie, M.B., Ch.B., Late Senior Assistant Medical Officer For Maternity and Child Welfare, County Borough of Croydon; Formerly Senior Clinical Assistant, Hospital for Sick Children, Great Ormond Street, London; Medical Officer, Southfields Centre. London: Humphrey Milford, Oxford University Press. 1931. Price \$2.00.

Dr. Emslie remarks that several reasons, mostly social and economic but often fanciful, have contributed to the disuse of breast-feeding. Many mothers fully competent to nurse their

infants are too easily persuaded that breast-feeding would be injurious to themselves or not so beneficial to their infants as modern artificial feeding.

In the seven chapters and appendices which make up this monograph, the anatomy and physiology of the breast, the establishment, management and difficulties of breast feeding are covered in detail and many other points of deep interest to every child-bearing woman are discussed.

Family physicians may recommend this book to prospective mothers and they themselves will find in it many matters of value in connection with advising such patients.

Thomson, Miles & Wilkie: Manual of Surgery

THOMSON & MILES' MANUAL OF SURGERY. By Alexander Miles, M.D., LL.D., F.R.C.S. Ed., Consulting Surgeon, Royal Infirmary, Edinburgh, and D.P.D. Wilkie, M.D., F.R.C.S. Ed. and Eng., Professor of Surgery, University of Edinburgh. Volume First, General Surgery. Eighth Edition. With 176 Illustrations. New York and London: Humphrey Milford, Oxford University Press. 1931.

This handy compendium of surgery, now in its eighth edition, has been revised by its authors with the aid of a number of distinguished specialists. It represents the present-day aspects of surgical practice, as exemplified in the Edinburgh School.

The present volume (Vol. 1) is devoted to the fundamentals of general surgery.

Transactions of College of Physicians

TRANSACTIONS OF THE COLLEGE OF PHYSICIANS OF PHILADELPHIA. Third Series, Volume The Fifty-Second. Philadelphia: Printed For The College. 1930. *Gratis*.

The fifty-second volume of the Transactions of the College of Physicians of Philadelphia, contains the papers read before the College from Jan. to Dec., 1930. There are 14 papers on general matters relating to medical science and history. The Section on ophthalmology contains 29 papers. In the Section on otology and laryngology 19 papers are presented. The remainder of the volume includes the reports of other sections of the College.

The general tone of these contributions to medical literature is up to the high standard attained in recent volumes.

Haycraft: Coal Miners' Nystagmus

COAL-MINERS' NYSTAGMUS. By G. F. Haycraft M.R.C.S., L.R.C.P., D.O.M. and S. London and New York: Humphrey Milford, Oxford University Press. 1931. Price \$0.30.

A short monograph which will be found interesting to industrial and other practitioners desiring information on this subject.

Roberts: Eye, Ear, Nose and Throat for Nurses

EYE, EAR, NOSE AND THROAT FOR NURSES. By Jay G. Roberts, Ph. G., M.D., F.A.C.S., Licentiate, American Board Otolaryngology; Chief of Staff, Eye, Ear, Nose and Throat, Los Angeles County Health Center; Member Staff, Pomona Valley Community Hospital; etc. Illustrated with 102 Half-tone and Line Engravings. Philadelphia: F. A. Davis Company. 1931. Price \$2.25.

The author is of the opinion that the nurse's education, in matters pertaining to the surgery of the head, has been neglected. He has written this book to correct this defect; his endeavor has been to bring to the nurse in training, as well as to the graduate, such a conception of diseases and operations of the eye, ear, nose and throat, as will enable her to give to the specialist in these disease the same aid and assistance and to the patient the same care and skill that she has given in the field of general medicine and surgery.

The book contains 23 short chapters dealing with all pertinent phases of the subject. It is well printed and the language is not too technical.

Miller: Gynecology

AN INTRODUCTION TO GYNECOLOGY. By C. Jeff Miller, M.D., Professor of Gynecology, Tulane University School of Medicine; Chief of the Department of Gynecology of Touro Infirmary; Senior Visiting Surgeon, Charity Hospital, New Orleans. Illustrated. Saint Louis: The C. V. Mosby Company. 1931. Price \$5.00.

Dr. Miller's book is an outcome of his teaching notes as a professor of gynecology. It includes only the essentials of the subject and is intended for the use of beginning students, for whom the larger textbooks of gynecology are not suitable. There are 16 chapters which cover the genesis and pathology of all the important gynecologic entities, omitting therapy with which the beginning student is not concerned.

A teaching experience of 25 years, apart from his extensive clinical knowledge, eminently qualifies Dr. Miller to write such a book and it should be welcomed by other teachers and students as a guiding and comprehensive outline of the subject.

International Medical Annual

THE INTERNATIONAL MEDICAL ANNUAL. A Year Book of Treatment and Practitioner's Index. Editors: Carey F. Coombs, M.D., F.R.C.P., and A. Rendle Short, M.D., B.S., F.R.C.S. Forty-ninth year. New York: William Wood & Company. 1931. Price \$6.00.

An excellent synopsis of the principal literature of medicine and surgery appearing in the year 1930. The contributors are leading practitioners of Great Britain. The subjects are arranged alphabetically and the abstracting and editing are well done.

MEDICAL · NEWS



*Courtesy of *Annals of Internal Medicine**

Aldred Scott Warthin, A.M., M.D., Ph.D., M.A.C.P.

Dr. Aldred S. Warthin Passes

On Saturday, May 23, 1931, American Medicine lost one of its most prominent and valuable representatives and pathology one of its outstanding teachers, with the sudden passing, due to a heart lesion, of Dr. Aldred Scott Warthin, professor of pathology and director of the pathological laboratories at the University of Michigan and the author of many highly original and thought-stimulating books and papers.

In his early years, Dr. Warthin took up the serious study of music and received a teacher's diploma from the Cincinnati Conservatory. This training and ability served him well in times of stress during his later years.

Since 1891 he had been continuously engaged in teaching and research in the great school at Ann Arbor, and thousands have been inspired by his words and example.

He was prominent in the organization and activities of the American College of Physicians, where his ripe and scholarly wisdom and keen executive ability will be sorely missed.

Up to the day of his passing, which came untimely, in the sixty-fifth year of his age, he was planning large and fruitful activities for the future. In some ways that seems an ideal way for a human career to end. He lived until he died.

Kerckhoff Institute Opened

The Kerckhoff Institute, for the study of cardiac diseases, was recently opened at Bad Nauheim, Germany, with full equipment and endowments sufficient to cover much research and educational work regarding disorders of the heart.

Course In Ophthalmology

When the specialties are regularly taught in a consistent and thorough manner, the situation will be improved.

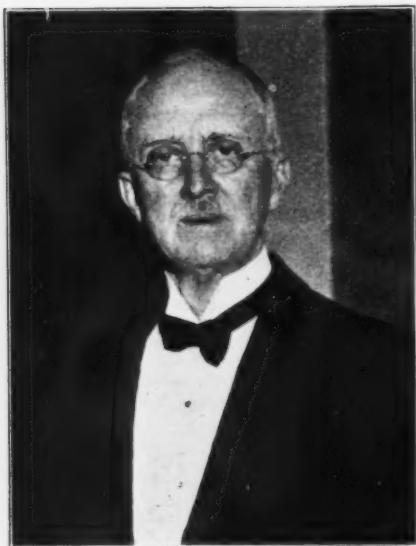
A step in the right direction is the announcement of a postgraduate course in ophthalmology, extending over one year and costing \$1000.00, to be given in Chicago. Full details may be obtained from Dr. R. C. Gamble, Secty., 30 N. Michigan Ave., Chicago.

Send your name to us for the first issue of the **JOURNAL OF VITAMINS.**

Opening In Iowa

Dr. Charles P. Tillmont, whose name is known to readers of CLIN. MED. AND SURG., passed to his rest recently, leaving an excellent opening for a general prac-

tioner, who can buy or rent the Doctor's office and equipment on reasonable terms. If interested, write to Mrs. Mary Tillmont Dupy, Centerville, Iowa.



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Hobart Amory Hare

Practically every physician of the present generation is indebted to Dr. Hobart Amory Hare for his illuminating and helpful textbooks on therapeutics and for the stimulus which was disseminated during the many years of his editorship of the *Therapeutic Gazette*, and will feel a sense of loss at the news of his passing, on June 15, 1931, after a long illness, at the age of 68 years.

Dr. Hare served on the faculty of the University of Pennsylvania, and for the last forty years of his life was professor of therapeutics and materia medica at Jefferson Medical College, Philadelphia.



© Keystone View Co.

Nurses For a Princess

Probably the births of few children have been surrounded by more costly pomp and ceremony than that of the recently-arrived fourth Imperial Princess of Japan, the nurses for whom are shown above. In order to secure their positions, Madames Setsuko Moricka, left, and Sada Kitano had to learn the language of the court, which differs from the ordinary speech of the Japanese.

Kitasato

The famous Japanese bacteriologist and teacher, Dr. Shibamiro Kitasato (pupil of Koch), who discovered *Bacterium pestis*—the causative organism of bubonic plague—and was largely responsible for the establishment of modern Medicine in Japan, passed to his rest, in his native country, a few weeks ago, at the age of 72 years.

Send · For · This · Literature

To assist doctors in obtaining current literature published by manufacturers of equipment, pharmaceuticals, physician's supplies, foods, etc., CLINICAL MEDICINE and SURGERY, North Chicago, Ill., will gladly forward requests for such catalogues, booklets, reprints, etc., as are listed from month to month in this department. Some of the material now available in printed form is shown below, each piece being given a key number. For convenience in ordering, our readers may use these numbers and simply send requests to this magazine. Our aim is

to recommend only current literature which meets the standards of this paper as to reliability and adaptability for physician's use.

Both the literature listed below and the service are free. In addition to this, we will gladly furnish such other information as you may desire regarding additional equipment or medical supplies. Make use of this department.

When requesting literature, please specify whether you are a doctor of medicine, dentist, medical student, a registered pharmacist, or a nurse.

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| <p>Q- 3 Storm Binder and Abdominal Supporter. 4-page folder by Dr. Katharine L. Storm.</p> | <p>Q-318 Blood Clinical and Laboratory Diagnosis. A book of 160 pages by Henry Irving Berger, M.D. Battle & Company.</p> |
| <p>Q- 47 Campho-Phenique in Major and Minor Surgery. Campho-Phenique Company.</p> | <p>Q-347 Graphic Chart of the Treatment of Circulatory Disturbances. Merk & Company.</p> |
| <p>Q- 95 Everything for the Sick. Lindsay Laboratories.</p> | <p>Q-354 Getting the Most Out of Life Stanco, Inc.</p> |
| <p>Q-116 Hemo-Glycogen, The New Product Hemoglobin Compound and Liver Extract. Chappel Bros., Inc.</p> | <p>Q-374 Table for Determining Date of Delivery. The Viburno Company, Inc.</p> |
| <p>Q-120 Building Resistance — Guaitonic. William R. Warner & Co., Ltd.</p> | <p>Q-383 Syrup Histosan Controls the Cough in Acute and Chronic Bronchitis Pneumonia and other Pulmonary Diseases. Ernst Bischoff Co., Inc.</p> |
| <p>Q-196 "Facts Worth Knowing." Intravenous Products Co. of America, Inc.</p> | <p>Q-391 Imhotep. Egyptian Medicine Was a quaint Mixture of Rationalism and Magic—Agarol. William R. Warner & Co., Inc.</p> |
| <p>Q-258 Prophylaxis. August E. Drucker Co.</p> | <p>Q-392 Arthritis. Its Classification and Treatment. Battle & Co.</p> |
| <p>Q-269 Special Course No. VI Traumatic Surgery. Illinois Post Graduate Medical School, Inc.</p> | <p>Q-401 When the Cross Roads are Reached in Hemorrhoids (Piles). Schering & Glatz, Inc.</p> |
| <p>Q-271 The Intestinal Flora. The Battle Creek Food Company.</p> | <p>Q-404 Urotropin, the Intravenous Administration of the Original Formaldehyde-Liberating Urinary and Systemic Antiseptic. Schering & Glatz.</p> |
| <p>Q-292 Acidosis and Infection—Alka-Zane. William R. Warner & Co., Inc.</p> | <p>Q-410 Acidosis. A Warning Sign in Pregnancy—Alka-Zane. Wm. R. Warner & Co., Inc.</p> |
| <p>Q-310 Conclusions from published research of the value of Ceanothyn as a hemostatic. Flint, Eaton & Co.</p> | |

- Q-414 Laboratory Test in Pictures—Silvogan. Ernst Bischoff Company, Inc.
- Q-425 Cerebrospinal Fever (Epidemic, Cerebrospinal Meningitis, Meningococcic Meningitis, Spotted Fever), Symptoms and Specific Treatment with Anti-Meningococcic Serum. The National Drug Co.
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- Q-548 The Hormone, June, 1931. The Harrower Laboratory, Inc.
- Q-550 One Moment, Doctor — AbilenA Water. The AbilenA Company.
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